

# THE WOODCRAFT MANUAL FOR BOYS

*The Fifteenth Birch Bark Roll*

BY

ERNEST THOMPSON SETON

CHIEF OF THE WOODCRAFT LEAGUE

*Author of "Wild Animals I Have Known," "Two  
Little Savages," "Life Histories of Northern  
Animals," "Forester's Manual," etc.*



*Published for*

THE WOODCRAFT LEAGUE OF AMERICA  
13 WEST 29TH STREET, NEW YORK

GARDEN CITY                      NEW YORK  
DOUBLEDAY, PAGE & COMPANY

1917

BTS  
H.S.  
3213  
W65  
545  
1917

Copyright, 1917, by  
ERNEST THOMPSON SETON  
*All rights reserved, including that of  
translation into foreign languages,  
including the Scandinavian.*



Band Totem

## MY BOOK AND MY TALLY



Tribe Totem

.....  
Name

.....  
Street, and city or town address

.....  
State

Age..... Height..... Weight.....

a member of the ..... Band of the ..... Tribe  
of Woodcraft Boys.

.....  
Guide

Initiation test taken ..... 191.....  
Date

Became s Wayseeker ..... 191.....

Became Pathfinder ..... 191.....

Became Minisino ..... 191.....

Became Sagamore ..... 191.....

List of 24 coups won (abbreviate):

.....  
.....  
.....  
.....

## My Book and My Tally

Became Grand Sagamore ..... Date ..... Grand Coups won

.....  
.....  
.....

Became Sachem ..... Date ..... Coups won

.....  
.....  
.....

Became Grand Sachem ..... Date ..... Grand Coups won

.....  
.....  
.....

### Degrees received:

Name of degree

When received

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

Became Shaman ..... Date .....



## PREFACE

"The Woodcraft Manual for Boys for 1917," is an official Manual of the Woodcraft League, giving full information as to the carrying on of the work of the Woodcraft Boys. It is also a handbook containing information on outdoor life for the boys of America.

Ernest Thompson Seton, whose life has been a constant inspiration and help to all lovers of outdoor things, is the author. Much of the material appears for the first time, though some of it has been used from other books with the permission of Mr. Seton and of the publishers.

F. H. Schmidt, J. A. Wolf, John L. Alexander, William Menaker and Hamlin Garland have helped in organizing work, as well as Jean W. Miller, Lina D. Miller, Anne S. Grumman and other members of the Council of Guidance.

Mrs. F. R. Hoisington assisted along several lines, particularly in the shaping up of the Coups and Degrees as found in the fourth section.

Mrs. Grace Gallatin Seton has contributed several articles and has given freely of her time in the working out of the many problems and in the editing of the book.

Philip D. Fagans, in addition to his duties as Executive Secretary, has written several articles and given of his time both in the working out of the organization and in editing the material.

The League acknowledges with hearty thanks the permission of Ernest Thompson Seton and Doubleday, Page & Company to use much of the material from the Book of Woodcraft; for the use of the poems and stories from "Woodmyth and Fable," by Ernest Thompson Seton, published by the Century Company; to Alice Fletcher for permission to use the songs and music quoted from her "Indian Songs and Stories"; to H. M. Burr and Association Press for the use of stories from "Around the Fire"; to Mrs. S. A. Ward for the use of the hymn "O Beautiful for Spacious Skies"; to McClelland, Goodchild and Stewart, Ltd., for "The Seven White Swans" from "Legends of Vancouver" by E. Pauline Johnson (Tekahionwake); for the use

of the "Corn-smut Girl" from "Indian Days of the Long Ago" by Edward S. Curtis.

The League also acknowledges with many thanks the cover medallion by J. F. Kelly and the drawing of the Woodcraft Boy; the article on the "Life Force" by Dr. Valeria Parker; the article "Wireless for Woodcrafters" by A. Frederick Collins; permission of Raymond Ditmars to use material from which the article and drawing of "Snakes, Good and Bad" were made; and the games suggested by a number of friends.

The Committee has attempted to have the Manual contain information on most of the subjects which would come up in group work. Where a subject has not been carefully covered, reference books have been given.

While Woodcraft as founded by Mr. Seton has been carried on for fourteen years, the Woodcraft League in its present form is but a few months old. Owing to the necessity for a Boys' Manual the present Birch Bark Roll has been produced under pressure and does not include all the material originally planned. But it is given to the public with the thought as expressed in the Preface to "Two Little Savages."

"Because I have known the torments of thirst,  
I would dig a well where others may drink."

And it is hoped that the spirit of the Manual is the same as has always characterized the work Mr. Seton has done with the boys and girls of the country.

THE MANUAL COMMITTEE.

October, 1916.

## OFFICERS OF THE NATIONAL COUNCIL AND THE COUNCIL OF GUIDANCE

ERNEST THOMPSON SETON, Chief  
MARK SULLIVAN, Secretary, ELON HUNTINGTON HOOKER, Treasurer  
PHILIP D. FAGANS, Executive Secretary

### Council of Guidance

JOHN L. ALEXANDER  
HAMLIN GARLAND, Historian  
H. W. GIBSON  
ANNE S. GRUMMAN  
HERMAN H. HORNE  
JEAN W. MILLER, Asst. Secretary

MAY FOLWELL HOISINGTON  
T. GILBERT PEARSON  
GRACE GALLATIN SETON, Chairman  
Business Committee  
JUDGE WM. H. WADHAMS  
HARVEY C. WENT, and the Officers

### National Council

JULES BACHE  
IRVING BACHELLER  
E. C. BISHOP  
NELTJE BLANCHAN  
STEPHEN A. BREED  
ARTHUR BRISBANE  
MRS. WALSTON HILL BROWN  
JOHN BURROUGHS  
DR. FRANK M. CHAPMAN  
HONORABLE FRANK I. COHEN  
ROLAND RAY CONKLIN  
WILLIAM CARROLL CORNWALL  
JOHN O'HARA COSGRAVE  
NATALIE CURTIS  
WILLIAM CURTIS DEMOREST  
FRANK N. DOUBLEDAY  
MRS. C. TARBELL DUDLEY  
BERTRAM H. FANCHER  
IVAN P. FLOOD  
WILLIAM H. FOLWELL  
MRS. WILLIAM H. FOLWELL  
A. R. FORBUSH  
DR. WILLIAM BYRON FORBUSH  
H. N. GIBSON  
MADISON GRANT  
WALLACE HECKMAN  
FREDERIC R. HOISINGTON  
ELON HUNTINGTON HOOKER  
MRS. ELON HUNTINGTON HOOKER  
MRS. CHARLTON T. HUDSON  
JAMES L. HUGHES

HERBERT HUNGERFORD  
JOSEPH HOWLAND HUNT  
CHARLES L. HUTCHINSON  
MRS. MARIETTA JOHNSON  
MRS. CHARLES D. LANIER  
ADOLPH LEWISOHN  
S. STANWOOD MENKEN  
ENOS MILLS  
DR. ROBERT T. MOFFAT  
PRESTON G. ORWIG  
HONORABLE STEPHEN . PORTER  
REVEREND F. EDWARD POWELL  
MARTIN A. RYERSON  
CAROLINE PUTZ-REES  
DR. LOUIS J. SEAMAN  
PROFESSOR W. H. SCHERZER  
EDWARD SEXTON  
ALBERT SHAW  
HONORABLE JOHN M. SLATON  
HUGH SMILEY  
MARK SULLIVAN  
LORADO TAFT  
IDA M. TARBELL  
WILLIAM H. THOMPSON  
MRS. CHARLES EDWIN TOWNSEND  
HIS EXCELLENCY DR. HENRY VANDYKE  
PROFESSOR CHARLES D. WALCOTT  
JOHN J. WATSON, JR.  
GEORGE L. WHITE  
JESSE LYNCH WILLIAMS

ELLA WHEELER WILCOX



## A MESSAGE FROM THE WOODCRAFT CHIEF TO THE BOYS OF AMERICA

Let me tell you the story of the Frog-boy.

He was lying on the bank of a reedy pond the first time that I saw him, eagerly watching to locate the loud call of the spring peepers that were uttering their shrill "*peep, peep, peep*," from many near parts of the pond.

When I spoke to him, he turned quickly, and looked a little ashamed to be caught at such a small job as watching peepers.

"Did you see one?" I asked.

"No; at least, only its tail," was the reply.

I smiled and said, "You didn't see its tail, because it hasn't any."

"Why, I thought they were lizards; whistling water lizards."

"No, it is a frog; a very small one; but he blows out his throat like a bladder as big as himself and through that makes noises like a little steam whistle."

He stared at me; so I took out my pond net and soon dipped out one of the little frogs.

His eyes were ablaze with interest, and presently his shyness gave way. A large bird flew overhead, swinging through the air in a succession of festoons. He said eagerly, "What is that?"

"A flicker," I replied. "See the sheen of his yellow wings like sun rays as he flies? See the white star on his back? and, on his breast, if you could see, you would find a dark moon, so he is in all ways marked for the heavenly bodies."

As we walked along, he darted aside and returned with a yellow flower.

"What is it called?" was his question.

"The yellow moccasin flower," I answered; "see, it is shaped like a moccasin;" and I showed him how cleverly it utilizes the bees to make its fertilization successful.

I never saw a keener young Woodcraft boy. He drank in all I could tell him, and asked questions faster than I could answer

them. He was a true naturalist, burning with love for all these things of the woods, but suffering for lack of some guide. He had no books, not even a sympathetic friend; and before our walk was finished he made me his confidant. He told me in his own way how he longed to know all these things and how he wanted to be with them.

He carried all the flowers I had named. By the way he spoke of them, I knew that he would never forget those names as long as he lived; and, when I left him, he asked shyly, "Some day soon, will you tell me some more?"

Poor lonely, loving child of the woods! My heart went out to him. I wonder if he got as much happiness out of hearing as I did out of telling those things.

Afterward, I took him many times for little walks and talks among the birds and flowers, and from these we got on to other things. The chance of a cut finger one day, and his getting poisoned by ivy, led to the whole subject of first-aid, and from that to the duty of being strong in body. Removing some broken glass from a road where it was liable to hurt some one's feet or bicycle, was the beginning of thought for others and duty to the neighbors. He was shy and distrustful of strangers; in fact, he avoided them and said so. But, when I reminded him that we were strangers that first day, he looked serious and said, "Yes, I know I lose a great deal by wanting to be alone. I'll fight against it."

When I spoke of the Great Spirit, he was silent, but deeply attentive.

These were among his beginnings. He grew up to be a naturalist; and, more than that, to be a fine type of citizen. Shy yet, he always will be; but he is a strong, clean, happy man, holding a high government position to-day; a blessing to those about him and a help to all who live in the woods.

Fortunately for him and those about him his kind destiny took him to the true school, the school of Woodcraft, where his body, brain, soul, and social instincts all were trained; and the training was what he had yearned for.

Listen, oh, American Boy of to-day! The things that I told him, and found such pleasure in telling, are the things I have written down in this book; for I think that you are a little like him. You want so much to know about wild life; you want to be strong; you are eager to be important in the gang you play with; you want to know and be in the big world; these are wholesome ambitions, and it is with the hope that I may help you as I helped the "Frog-boy" in those long gone woodland days that


## A Message

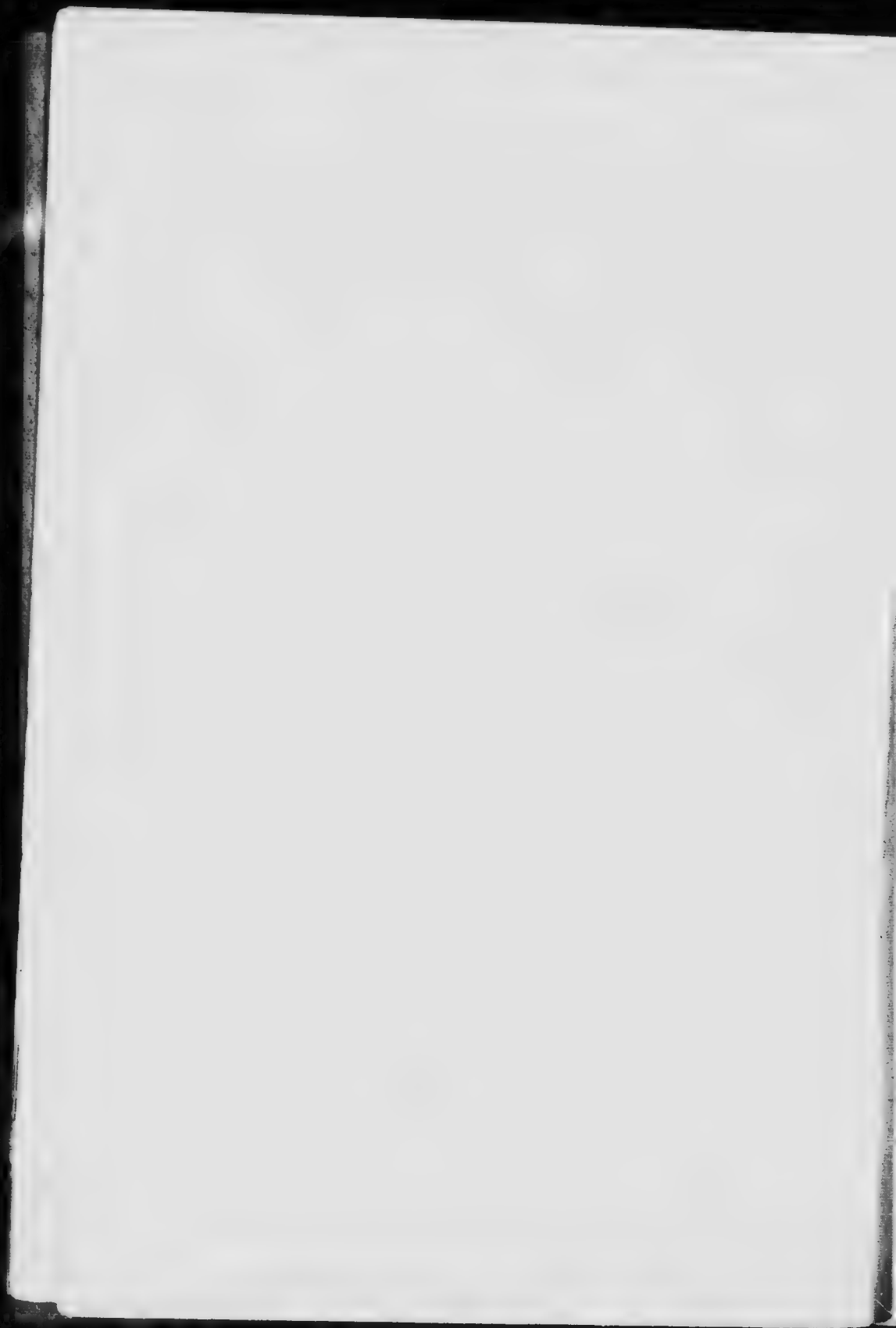
xiii

I offer you this volume. In this way, with help from other men and women who have been through it all, I volunteer to be your guide; for the Woodcraft Manual is only myself and themselves done into paper and ink.

*Ernest Thompson Seton*

---







## THE WOODCRAFT LEAGUE



Our purpose is to learn the outdoor life for its worth in the building up of our bodies and the helping and strengthening of our souls; that we may go forth with the seeing eye, and the "thinking hand" to learn the pleasant ways of the woods and of life, that we be made in all wise masters of ourselves; facing life without flinching, ready to take our part among our fellows in all the problems which arise, rejoicing when some trial comes that the Great Spirit finds us the rulers of strong souls in their worthy tabernacles.

The Woodcraft League believes that its message comes to the people of America, young and old, rich and poor. The work of the League is divided as follows:

The Big Lodge of the Woodcraft Boys, from twelve to eighteen, for which group this Woodcraft Manual is the official handbook.

The Big Lodge of the Woodcraft League for Girls from twelve to eighteen. (Manual now ready.)

The Little Lodge for children under twelve. (Manual to be published later.)

The Woodcraft Club for men and women over eighteen.

The Sun Lodge for men and women, twenty-one and over, interested in specializing in Woodcraft.

Each of these sections has its own printed matter and badge. The details of the work vary according to the needs of the group.

All are members of the Woodcraft League and wear the badge of the League, a white shield with blue horns.

The Headquarters are at 13 West 29th Street, New York City.

## TWELVE SECRETS OF THE WOODS

Do you know twelve secrets of the woods?

Do you know the umbrella that stands up spread to show that there is a restaurant in the cellar?

Do you know the "manna-food" that grows on the rocks, summer and winter, and holds up its hands in the Indian sign of "innocence," so all who need may know how good it is?

Do you know the vine that climbs above the sedge to whisper on the wind "There are coconuts in my basement"?

Can you tell why the rabbit puts his hind feet down ahead of his front ones as he runs?

Can you tell why the squirrel buries every other nut and who it was that planted those shag-barks all along the fence?

Can you tell what the woodchuck does in midwinter and on what day?

Have you learned to know the pale villain of the open woods—the deadly amanita, for whose fearful poison no remedy is known?

Have you learned to overcome the poison ivy that was once so feared—now so lightly held by those who know?

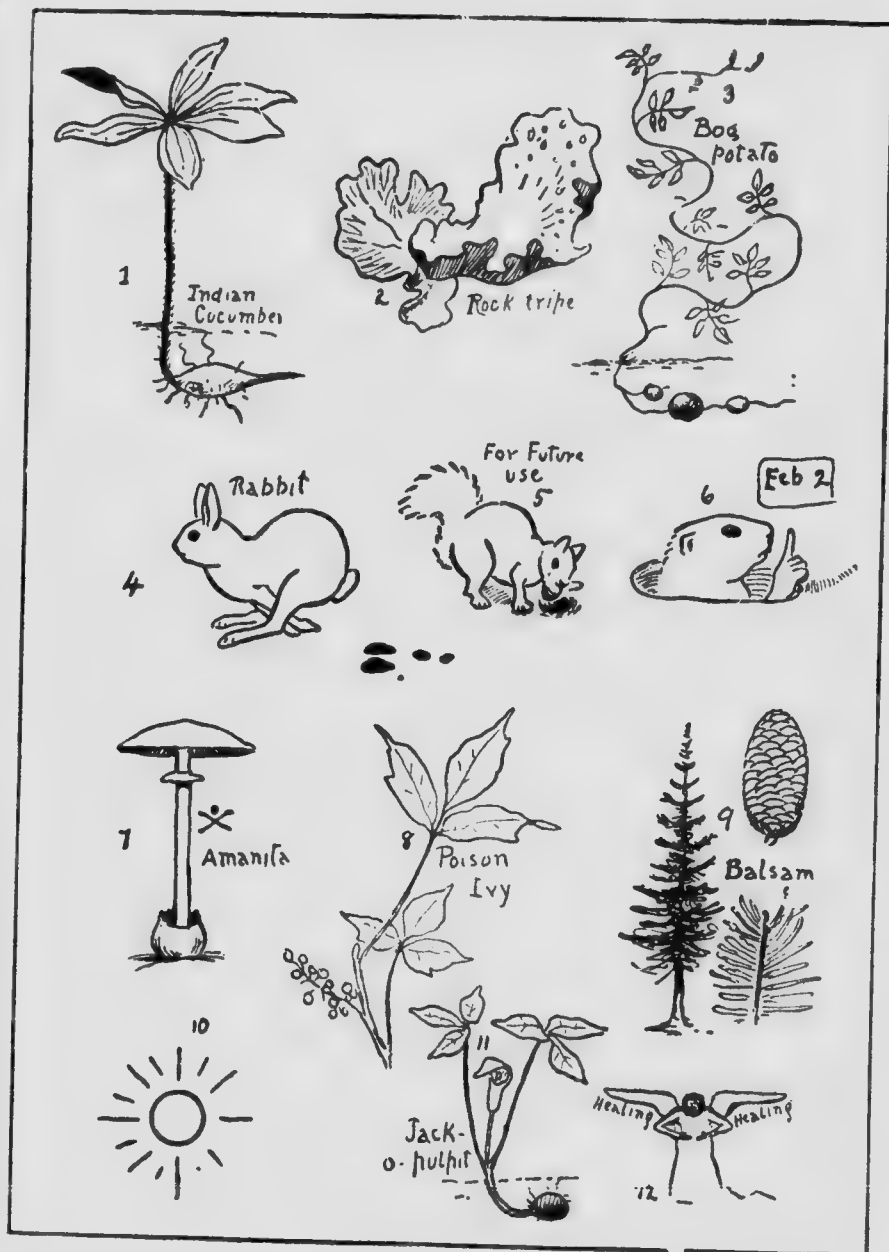
Have you proved the balsam fir in all its fourfold gifts—as Christmas tree, as healing balm, as consecrated bed, as wood of friction fire?

Do you know the wonderful medicine that is in the sky?

Have you tasted the bitter and dangerous bread of wisdom, the treasure that cures much ignorance, that is buried in the aisle of Jack-o-Pulpit's Church?

Can you tell what walked around your tent on the thirtieth night of your camp-out?

Then are you wise. You have learned twelve secrets of the woods. But if you have not, come and let us teach you.





## TABLE OF CONTENTS

	PAGE
PREFACE . . . . .	vii
OFFICERS AND MEMBERS OF THE NATIONAL COUNCIL . . . . .	ix
MESSAGE FROM THE CHIEF . . . . .	xi
THE WOODCRAFT LEAGUE . . . . .	xv
THE TWELVE SECRETS OF THE WOODS . . . . .	xvi

## SECTION I

### ORGANIZATION AND GENERAL INFORMATION

WOODCRAFT MEN—THEIR MESSAGE TO WOODCRAFT BOYS . . . . .	3
HOW TO FORM A TRIBE	
To Become a Woodcraft Boy . . . . .	5
To Start a Tribe . . . . .	5
Woodcraft Boy's Suit . . . . .	6
Band Meetings . . . . .	7
Charter . . . . .	7
A Meeting Place . . . . .	7
Councils . . . . .	7
Regular Council . . . . .	8
Order of Doings . . . . .	8
Decorum of Council . . . . .	9
Indoor Council . . . . .	9
The Woodcraft Laws . . . . .	10
Initiations . . . . .	10
Initiation Trials . . . . .	11
New Member's Work . . . . .	11
Growth . . . . .	11
Woodcraft Indians . . . . .	11
Totems . . . . .	12
Requirements for Ranks . . . . .	18
Entering or Wayseeker . . . . .	18
Pathfinder . . . . .	18
Minisino . . . . .	19
Titles and Officers . . . . .	20

Badges . . . . .	PAGE
Illustration . . . . .	21
Meaning of the Badges . . . . .	23
Salute . . . . .	22
MEANING OF THE COUNCIL RING . . . . .	24
CEREMONY OF GRAND COUNCIL . . . . .	25
COUNCIL ROBE . . . . .	26
MODEL CONSTITUTION FOR A TRIBE . . . . .	27
THE INBRINGING OF A NEWCOMER . . . . .	30
INSTALLATION OF THE HIGHER RANKS . . . . .	32
CONFERRING OF COUPS AND DEGREES . . . . .	32
LIST OF SAGAMORES AND SACHEMS . . . . .	33
WINNING A NAME . . . . .	34

## SECTION II

## TRIBE AND COUNCIL ACTIVITIES

SUGGESTIONS ON TRIBAL WORK . . . . .	35
General . . . . .	37
First Three Months (Pathfinder) . . . . .	38
Next Five Months (Minisino) . . . . .	38
GAMES	
<i>Council</i>	
Tub Tilting . . . . .	43
Indian Leg Wrestle . . . . .	44
Navajo Feather Dance . . . . .	44
Cock Fighting . . . . .	45
One-legged Chicken Fight . . . . .	45
Strong Hand . . . . .	45
Stung . . . . .	45
Talk-fest . . . . .	46
Solemnity . . . . .	46
<i>Outdoor</i>	
Watching by the Trail . . . . .	46
Trailing . . . . .	46
Apache Relay Race . . . . .	47
Chinese Tag . . . . .	47
Bat Ball . . . . .	47
Scouting . . . . .	47
Quick Sight . . . . .	48

# Contents

xxi

PAGE

PAGE

21	Far Sight	49
23	Home Star	49
22	Hostile Spy	49
24	Tree the Coon	50
24	Rat on Lodge	50
25	Water-boiling Contest	51
26	Medley Scouting	51
27	Still-hunting the Buck	52
30	<i>Water</i>	
32	Spearing the Great Sturgeon	55
32	Canoe Tag	57
33	Tilting in the Water	57
34	<i>Indoor</i>	
	Odds and Evens	57
	Blind Man's Buff	57
	My Vacation	58
	Names by Topics	58
	Fortune	58
	Guessing Game	59
	Kingdom	59
	Geography	59
	Game of Menagerie	60
	Menagerie Party	60
	A Portrait Party	60
	Magic Music	61
	Fireside Trick	61
	The Lone Star Trick	61
	Feather Foot-ball	62
	<i>Songs</i>	
	Group Singing	65
	America	65
	Star-Spangled Banner	66
	O Beautiful for Spacious Skies	67
	Rouser	69
	Alouette	70
	Omaha Tribal Prayer	71
	Hike Song	72
	Good Night	73
	Canoeist's Love Song	73
	Death Song	74
	Zon-zi-mon-de	75
	Muje Mukesin	76
	Hither Thunder	76

	PAGE
DANCING	
Dancing . . . . .	77
Dances	
Storm Cloud . . . . .	80
Lone Hunter . . . . .	81
The Dog Dance . . . . .	83
Ojibwa Snake Dance . . . . .	84
Caribou Dance . . . . .	85
Animal Dance of Nana-bo-jou . . . . .	87
PLAYS, PAGEANTS, AND MASQUES	
The Peace Pipe Ceremony . . . . .	89
Suggested Books . . . . .	90
CAMPFIRE STORIES AND POEMS	
The Road to Fairyland . . . . .	95
The Fairy Lamps . . . . .	95
The Origin of the Blue Bird . . . . .	97
Twin Stars . . . . .	98
Gitche-o-kok-o-hoo . . . . .	98
The Story of Corn-smut Girl . . . . .	99
The First Gang . . . . .	100
The Seven Swans . . . . .	108
How Men Found the Great Spirit . . . . .	114

## SECTION III

## THINGS TO KNOW AND DO

CHAPTER I. CITY WOODCRAFT	
Woodcraft in Town . . . . .	121
Wireless for Woodcrafters . . . . .	123
Totems in Town . . . . .	131
Fire—Servant or Master? . . . . .	133
Sleep Outdoors . . . . .	135
Health . . . . .	137
Health Hints . . . . .	139
The Life Force . . . . .	140
Breathing . . . . .	141
Don't Turn Out Your Toes . . . . .	141
Keen Eyes . . . . .	141
Dry Footgear . . . . .	142
Ready Help . . . . .	142
Patriotism and Citizenship . . . . .	145



# Contents

xxiii

PAGE

PAGE

77

Hiking . . . . . 146

80

Sign Language . . . . . 148

81

Picture Writing . . . . . 155

83

Weather Signals . . . . . 160

84

Railroad Signals . . . . . 161

85

Roof Camping . . . . . 163

87

Individual Tally Book . . . . . 164

Indian Names for the Months . . . . . 164

## CHAPTER II. CAMPERCRAFT

89

Camping Out . . . . . 169

90

Outfitting . . . . . 170

Outfit for Six . . . . . 170

95

Tents . . . . . 172

95

Teepees . . . . . 172

97

Running Camp . . . . . 172

98

Camp Grounds . . . . . 173

98

Arriving . . . . . 173

99

Sanitation . . . . . 174

100

Leadership . . . . . 174

108

Team Work . . . . . 174

14

Camp Officers . . . . . 175

Camp Program . . . . . 175

Group Work . . . . . 175

Rules . . . . . 175

Inspections . . . . . 176

Horns of High Hikers . . . . . 176

Woodcraft Council Ring . . . . . 176

Councils . . . . . 177

21

Making Council Fire . . . . . 177

23

Totem Pole . . . . . 178

31

Beds . . . . . 179

33

Water . . . . . 179

35

Mosquitoes . . . . . 180

37

Lighting a Fire . . . . . 181

39

Camp Cookery . . . . . 181

40

Cooking Without Utensils . . . . . 183

41

The Gee-String Camp . . . . . 184

41

Camp Horn . . . . . 186

41

## CHAPTER III. WOODLORE AND HANDICRAFT

42

Edible Wild Plants . . . . . 191

42

Mushrooms . . . . . 194

5

White Man's Woodcraft—Measuring at a Distance 198

	PAGE
Weather Wisdom . . . . .	200
When Lost in the Woods . . . . .	202
Tracking and Trailing . . . . .	203
Keeping up the Old Trails . . . . .	215
The Value of Doing . . . . .	216
Indian Tweezers . . . . .	217
Indian Clock . . . . .	217
The Watch as a Compass . . . . .	218
Home-made Compass . . . . .	218
Lights . . . . .	218
Hunter's Lamp . . . . .	219
Woodman's Lantern . . . . .	219
Knife and Hatchet . . . . .	220
A Waterproof Shelter . . . . .	224
Camp Loom . . . . .	226
Navajo Loom . . . . .	227
Camp Rake . . . . .	228
Camp Broom . . . . .	229
Rubbing-stick Fire . . . . .	230
Drum . . . . .	232
The Woodcraft Willow Bed . . . . .	232
Making a Teepee . . . . .	236
Putting up a Teepee . . . . .	239
Archery . . . . .	241
How to Make a Bow . . . . .	241
Woodcraft Paints . . . . .	243
Woodcraft Dyes . . . . .	245
Lace or Thong . . . . .	245
Woodcraft Buttons . . . . .	245
Handicraft Stunts . . . . .	246
Miscellaneous . . . . .	246
Spoons . . . . .	248
Bird Boxes . . . . .	249
Sparrow-proof Bird Boxes . . . . .	251
Knots . . . . .	253
Blazes and Signs . . . . .	253
Blazes . . . . .	253
Stone Signs . . . . .	257
Grass and Twig Signs . . . . .	257
Smoke Signals . . . . .	258
Signals by Shots . . . . .	258
Tramp Signs . . . . .	259
How to Raise Money . . . . .	260

# Contents

XXV

PAGE

## CHAPTER IV. FRIENDS IN THE OUT OF DOORS

How to Know the Wild Things . . . . .	265
Sixty-four Common Wild Flowers . . . . .	268
The Woodcraft Boy in the Forest . . . . .	280
Fifty Common Forest Trees . . . . .	283
The Stars . . . . .	314
Forty Birds . . . . .	321
Snakes, Good and Bad . . . . .	338

## SECTION IV

### WOODCRAFT EXPLOITS AND ACHIEVEMENTS OR COUPS AND DEGREES

WOODCRAFT EXPLOITS AND ACHIEVEMENTS. . . . .	345
COUPS . . . . .	345
Their use . . . . .	345
Class I—Athletics . . . . .	346
Class II—Campercraft . . . . .	356
Class III—Nature Study . . . . .	362
Class IV—Crafts . . . . .	364
Class V—Entertainer. . . . .	368
Class VI—Life Craft . . . . .	369
DEGREES. . . . .	369
Their Use . . . . .	369
List of Degrees—sixty-four in all. . . . .	370
INDEX . . . . .	429



## **SECTION I**

### **ORGANIZATION AND GENERAL INFORMATION**

- |  |   |
|--|---|
| <b>Woodcraft Men—Their Message<br/>to Woodcraft Boys</b> | <b>Model Constitution for a Tribe</b>   |
| <b>How to Form a Tribe</b>                               | <b>The Inbringing of a Newcomer</b>     |
| <b>Meaning of the Council Ring</b>                       | <b>Installation of the Higher Ranks</b> |
| <b>Ceremony of Grand Council</b>                         | <b>Conferring of Coups and Degrees</b>  |
|  | <b>List of Sagamores and Sachems</b>    |
|  | <b>Winning a Name</b>                   |



## SECTION I

### ORGANIZATION AND GENERAL INFORMATION

---

#### WOODCRAFT MEN

##### Their Message to Woodcraft Boys

In the beginning, Woodcraft was the only science known to man, because he lived in the woods, and there had to master the things of his everyday life.

Thus it gave him skill with his hands, speed with his feet, as well as knowledge of all wild nature. It taught him to swim and be brave as well as obey his leader and be true to his clan. The first time he failed in any of these things might easily mean death. Those who survived were the ones who had learned by heart all the big lessons of Woodcraft. It was not only so then, but it has always been so, and is so to-day.

All the great men who have made history were trained first in the school of Woodcraft. Nimrod, the mighty hunter, who built the city of Nineveh; Sardanapalus, the lion-killer, the Monarch of Assyria, who, by force of his own arms overcame two lions that attacked him at one time; Brennus, the Gaul, who could shoe his own horse and who was able to master all Rome; Rollo, the sea king, who could steer his own ship in the wildest water and landed in Normandy to establish order and lay down laws that are now accepted all over the world; William, the Conqueror of England, the hunter whose bow was the strongest among all the archers of his day; Charlemagne, the great hunter, careful farmer, world master; William of Orange, hunter, fisherman, sportsman, horseman, arbiter of the destinies of all the British Empire; Washington, hunter, woodsman, frontiersman, farmer, and army scout, able to run, wrestle, command or obey; Abraham Lincoln, hunter, pioneer, woodsman, axeman, farmer, deck-hand; Robert E. Lee, hunter, woodsman, horseman, planter, farmer; U. S. Grant, back-woodsman, frontiersman, farmerboy, soldier, big brother to five little ones. These

and the whole long list of names in the Hall of Fame, all bear testimony to the truth of this: whether in wood or on farm, all their essential training was in mastering the daily obstacles of life; obstacles which called for handicraft and nature knowledge, strength and dogged determination, qualities which ever doubled as they were used.

It was so in the earliest days of man, in the Colonial days of America, and to-day, and always will be. For as surely as Woodcraft was nature's school for man when she constructed him out of brute material, so surely is it nature's school for boys to-day. The things that it engenders and nourishes to power are the things that spell success in life, no matter where the boy's life may be cast.

The Woodcraft Boy to-day does not have to study the trail to see what beasts have gone to drink, or put his ear to the ground to know if the buffalo herd is coming; but he knows that in the city the telephone book is the key to the business world. He does not have to smell the wind to learn where the jungle is burning, but he knows where the fire department box is and how to turn in an alarm. He does not have to look up and down the stream for crocodiles before swimming over, but he watches both ways before crossing the street. He need not study the scratches on the trunk for guides to camp, but he notes the name of the street when turning the corner, and in the midst of noise and excitement he keeps his head and knows his way as his forebears kept their wits in the midst of a herd stampeded; otherwise, they, themselves, would have had no descendants. He clings to the blessed heritages from those other days, so he is healthy, and he knows how to live so as to have the overflowing sense of power. It is in his nature to learn again the trees and plants and to understand the message of any whistle in the woods or fields. And because he loves them, he protects the beautiful things of his country. He sees the wonders of the skies and is touched by the mystery of the stars. He knows where to camp; how to sleep; how to cook; how to live comfortably in primitive conditions. And, trained in the far back game of clan, he is thoughtful at home and helpful alike to younger children and older folk. The calm fortitude, built up of manifold training, teaches him to meet friend or foe, pleasure or danger, simply, and bravely. Whatever his situation may be he does his best, conscious of the Great Spirit's presence, and honors Him in his life.

These are the things that Woodcraft built into us in the beginning; these in their total are *High Manhood*; and these are



the things that are ever ready to reappear at the call of Woodcraft to-day.

### HOW TO FORM A TRIBE OF WOODCRAFT BOYS

#### To Become a Woodcraft Boy

One may easily become a Woodcraft Boy, either by joining a Tribe already organized or by forming a new Tribe. Get together nine other boys, twelve years of age or over, and a man twenty-one years of age to act as a Guide. Let each read the Woodcraft Manual for Boys carefully, so they may know what Woodcraft is. Send to Headquarters for Application for Charter. Then select a name for the Tribe, usually of historic or special interest and often an Indian name; also select a totem. Have the boys sign the Application for Charter. Send the Application with three dollars to the National Headquarters, the Woodcraft League, 13 West Twenty-ninth Street, New York City, where the Council of Guidance will act on your Application and give your Tribe a Charter.

#### To Start a Tribe

The Tribe is the unit of organization, consisting of not less than ten, nor more than fifty members. Each Tribe is divided into Bands of not less than five nor more than ten members. Each Band has a Guide, a man eighteen years of age or over. One of the Guides should be selected as Head Guide of the Tribe and must be twenty-one years of age or over. The Guides direct the work of the Bands, the Head Guide being responsible to Headquarters.

In beginning it is wise to have the officers temporary or for a short time only. Elect, or have the Guide appoint, a Chief, a second Chief, a Tally Keeper, and Wampum Keeper. Decide the time and place of your meetings, the dues (about five cents a week is usual), and other matters of a similar nature.

You should then divide the group into Bands of not less than five boys and not more than ten. Each Band should elect, or the Guide appoint, a Chief, and if meeting separately, a Tally Keeper and Wampum Collector, who shall report to the Tribal officers.



#### STYLE OF SUIT FOR WOODCRAFT BOYS

Made of greenish gray similar to the uniforms of the Forest Rangers. May be of khaki or woolen mixture, so that the suit may be worn for ordinary daily use.

## Organization

7

### Band Meetings

Each Band should select a Band name and totem. The Band should hold a weekly meeting followed by a Tribal meeting (of all the Bands), or it may be decided to make the Tribal meetings less frequent.

### Charter

The Charter, costing \$3.00 annually, certifies that the Tribe is registered at Headquarters and entitles the Tribe to a definite place in the Woodcraft League, to recognize achievements according to the Woodcraft Manual for Boys and to wear the badges of the League. With the Charter comes a Guide's Appointment, also two Pledges to be pasted in the Tally Book, one for the members to sign and one for the officers to sign. The \$3.00 charter fee covers all the expenses of chartering a group regardless of its size (up to fifty). Individual badges of rank should be purchased as needed. See p. 23, also page 11.

### A Meeting Place

One of the very first problems the Tribe will have to face is that of providing a place to meet. It should be comfortable, clean, quiet, and large enough to seat the Tribe in a circle. For the Band meeting a smaller room will do. If the room is used by others it will be necessary to use it without change; but when a Tribe has entire control of a room, or when the room is used by more than one Tribe, it will be possible to fix it up so as to suggest an outdoor council ring, the interior of a log cabin or stockade. For the outdoor ring see Section III, Chapter 2.

### Councils

In the Woodcraft League the meetings of the Bands and Tribes are called Councils. A weekly meeting would be called Regular Council, a meeting with a more elaborate program and with visitors is called Grand Council. A meeting of the Guides and officers is called High Council. One at least of the Guides should familiarize himself with the running of the Council, as soon as possible.

## REGULAR COUNCIL

If it is possible, open the meeting by making the fire with the rubbing sticks, in which case the Leader should begin with the paragraph "Now light we the Council Fire," as on page 25, ending with the paragraph, "That His Wisdom will be with us." (If matches are used omit the above.) Continue as follows: "The four corners of this symbol fire stand each for Fortitude, Truth, Beauty, and Love, from which radiate the twelve golden laws of Woodcraft."

The Guide (or Chief) now speaks from the Council Rock: "Let the Keeper of the Tally call the roll." In large meetings this is done by Bands. Each Leader stands as his Band is called by name, salutes the Chief, and says: "O Chief, Ten of our Band—all here," or "Eight here," as the case may be.

After this is done, the regular order of parliamentary business is followed as below.

## ORDER OF DOINGS IN COUNCILS

Roll Call.

Tally of Last Council or Report of Tally Keeper.

Report of Wampum Keeper.

Business Arising out of Tally.

Scouts' Reports, also Officers of the Day. (This includes: first, all unusual work done for the Tribe by a member and is reported by the Guide; second, all matters of interest, particularly those relating to nature study by members of the Tribe.)

Left over Business.

For the Good of the Tribe. (At this point members may bring up any matter which ordinarily would not come up under other heads. Matters of discipline, etc.)

Achievement Badges claimed and awarded. (Previously passed in committee.)

New Business.

New Members.

Initiations.

Challenges, etc. (These may be athletics of any sort either at the Council ring or otherwise. They may also include challenges at story telling, dancing, singing, cooking, fire-lighting, nature study. The challenger arises, salutes the Chief, and says: "O Chief I,———of———Band challenge —— of —— Band.")

## Organization

9

Games. (These may be individual such as hand wrestling, chicken fighting; or group games, such as "stung," etc. They may also include such things as movies, etc.)

Songs, dances, stories.

Close the Council with the Omaha Tribal Prayer as all stand about the fire with hands and faces upraised.

The Chief then announces, "Our Council is ended."

### DECORUM OF COUNCIL

In the Council no one may cross or remain within the open space, except the Chief presiding, the members speaking or performing, and the Keeper of the Fire when attending to his duties. Nevertheless the Fire Keeper must not tend the fire at a time when it will interfere with any performance or distract attention at an important moment.

For assent or approval, we say "How"; for "No" we say "Wah"; the Chief at the "Council Rock" is addressed "O Chief," and speaks not from the chair, but from the "Council Rock." Any one wishing to speak, arises, salutes, giving the Woodcraft sign as given on page 24, says, "O Chief" and waits until the Chief recognizes him by name or gesture, thus giving the sole right of speech for the time.

It is not proper to whisper in Council, nor to laugh when a serious matter is being presented, nor look around much, nor heed not the speaker, nor should one make noise or tap with one's feet or hands, or with a stick, or chew or eat or lounge about, or lie down, nor turn to look when some one arrives late, but in all ways act as though each speaker were great and important, however much he may be otherwise. For this is good manners.

The order of ceremony for Grand Council is found on page 25.

### INDOOR COUNCIL

For indoor councils it is often desirable to have an "indoor council fire" which is made by connecting one or more electric bulbs, covering the lights with orange crêpe paper and then building around it a "log cabin fire." Of course, nothing burns but the light but the effect is very striking and the expense is slight.

## The Woodcraft Laws

The laws for the Woodcraft Boys (and for the leader as far as possible) are:

1. *Be Brave.* Courage is the noblest of all gifts.
2. *Be Silent* while your elders are speaking and otherwise show them deference.
3. *Obey.* Obedience is the first duty of the Woodcraft Boy.
4. *Be Clean.* Both yourself and the place you live in.
5. *Understand and respect your body.* It is the Temple of the Spirit.
6. *Be the friend of all harmless wild life.* Conserve the woods and flowers, and especially be ready to fight wild-fire in forest or in town.
7. *Word of honor is sacred.*
8. *Play fair.* Foul play is treachery.
9. *Be Reverent.* *Worship the Great Spirit* and respect all worship of Him by others.
10. *Be Kind.* Do at least one act of unbargaining service every day.
11. *Be Helpful.* Do your share of the work.
12. *Be Joyful.* Seek the joy of being alive.

## Initiations

When brought into some new group such as the school or club, one is naturally anxious to begin by making a good impression on the others, by showing what one can do, proving what one is made of, and by making clear one's seriousness in asking to be enrolled. So also those who form the group; they wish to know whether the newcomer is made of good stuff, and is likely to be a valuable addition to their number. The result is what we call initiation trials, the testing of the newcomer.

The desire to initiate and be initiated is a very ancient, deep-laid impulse. Handled judiciously and under the direction of a competent adult guide, it becomes a powerful force for character building, for inculcating self-control.

In Woodcraft we carefully select for these try-outs such tests as demonstrate the character and ability of the newcomer, and the initiation becomes a real proof of fortitude, so that the new boy is as keen to face the trial, as the Tribe he would enter is to give it.

## Organization

11

### THE INITIATION TRIALS

The trial should be approved by the Council and be given to the candidate when his name is proposed for membership—that is, posted on the Totem pole where it remains for seven suns. In camp a shorter time may be allowed at the discretion of the leaders.

1. *Silence.* Keep absolute silence for six hours during the day-time in camp, while freely mixing with the life of the camp. In the city keep silence from after school till bedtime.

2. *Keep good-natured.* Keep absolutely unruffled, for one day of twelve hours, giving a smiling answer to all.

3. *Exact Obedience.* For one week give prompt, smiling obedience to parents, teachers, and those who have authority over you. This must be certified to by those in question.

4. *Make a useful woodcraft article,* such as a basket, a bench, a bed, a bow, a set of fire-sticks, etc.

5. *Sleep out; without a built roof overhead,* for three nights consecutively, or ten, not consecutively. (Sleeping porch allowed by special permission of Council.)

### NEW MEMBER'S WORK

After the new member has learned the Laws and taken the Initiation test, the first thing to claim his attention is that of qualifying for the rank of Pathfinder and later of Minisino, then the Achievements, each with its appropriate badge, which are described on page 345. In time he will have a Woodcraft suit, but this may come later.

### Growth

The idea of growth is a big one in the Woodcraft program. The new member should grow from Wayseeker to Pathfinder and then to Minisino. Then he should advance so as to be able to make the Achievements and Degrees which are mentioned in Section IV of the Woodcraft Manual.

### Woodcraft Indians

Such tribes as were chartered under the name Woodcraft Indians may retain the old name and forms if they so desire.

**BLUE BUFFALO**

1902

On white ground.

**FLYING EAGLES**

1902

Black and white on red.

*Yek-yek-yek***BLUE HERONS**

1904

Blue on green.

*Hrrrrr***HORNED  
KINGBIRDS**

1902

Black and white on pale red.

**SINAWA**

1903

Black on red.

**BLACK BEARS**

1906

Black on red

**AHMEEKS**

1909

Black on red.

A loud "slap-pl"

**SILVER FOXES**

1904

Black on white.



10

**RED TRAILERS**

1903

Red on pale yellow

**MOON BAND**

1905

Yellow on blue

**OWENOKES**

1904

Red with black lines  
on pale blue.**BLAZING ARROW**

Red on pale yellow.





**RAVEN**  
Black on red.  
*Hroo-Hroo*



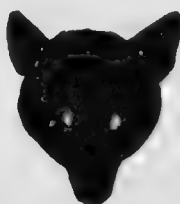
**HOOT OWL**  
Black and yellow on green.  
*Wa-ha-hoo-hoo*



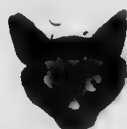
**OROKOHO or CAT OWL**  
Red and white on purple.  
*Hoo-hoo-hoo*



**SCREECH OWL**  
Dark red, white face on purple ground.  
*Whil-il-il-oo*  
A soft quavering cry.



**BLACK WOLF**  
Black on yellow or LOBO BAND  
Gray on pink.  
*Ya-hooooooo*



**BLACK CAT**  
Black with yellow eyes on yellow ground.  
*Me-ow*



**WOLF**  
Black on red for Wolves.  
Brown on yellow for Brown Wolves.  
Red on pale blue for Red Wolves, etc., etc.  
*Yaw-waw*



**LYNX**  
Brown on gray.  
Brown on blue.  
Red on green.  
*Yow-wow-wow*



**FOX**  
Red on yellow for Red Foxes.  
Silver on gold for Silver Foxes.  
*Yap-yurrr.*



**WILD CAT**  
Gray or brown on tea green.  
*Yah-row-row*



**GRIZZLY**  
Brown.  
*Grr-woof*



**LITTLE BEAR**  
Black or brown on pale buff.  
*Woof-woof*

**FIREBOAT**

Dark blue on pale green.  
A long whistle.

**FLYING BLACK HAWK**

Black on orange or red.

**LOON**

Black and white for Red Loon, Amber Loon, etc., on blue ground.  
A tremulous *whoow*.

**THUNDER CANOE**

Black or dark gray on pale blue.

A whistle then a bang.

**BALD EAGLE**

White and brown on yellow.  
*Krek-krek-kay*

**MUSTANG**

Black Mustang, Red Mustang, and Wild Horse; on yellow ground.  
A long neigh.

**BLACK HAWK**

Black on red.  
*Kek-kek-kek*

**BLUEHAWK**

Blue on blood red.  
*Indian warhoop*

**NIGHT-BIRD**

Brown and white on pale blue-green.

*Peabody-peabody-peabody* whistled.

**BUCKHORN.**

Black buck, etc., on pale green ground.  
A shrill, hissing whistle.

**FORKED LIGHTNING**

Red or yellow on blue-green.  
*Fizz-bang*

**THUNDER**

Orange on black.  
*Bang-rumble-boom*

**BUCK**

Purple on blue.  
A shrill whistle.

**SEABIRD**

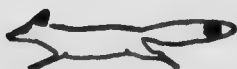
Black and white. 1  
*Kee-way-a*

# Organization

15



**SILENT BEAVER**  
Brown on blue.  
No mouth—no cry



**SHUNKA-REELA.**  
(running fox)  
Yellow and black on pale blue.  
*Yap-yahoo*



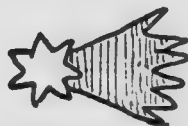
**STING RAY**  
Green with black marks on pale red ground.



**RED-GODS**  
Red on pale blue.



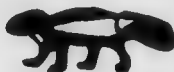
**BADGER**  
White and black on yellow ground.  
A rattling whistle



**BLAZING STAR**  
Yellow star—red tail—on blue.



**WHOOPING CRANE**  
White on blue ground—black wing.  
*Kah-roo*, a trumpeted croak.



**WOLVERINE**  
Black and pale brown on white.  
*Garoooo*



**BLUE MOON**  
Pale blue on deep green.  
Any known night song.



**RED-GODS**  
Red with black lines on pale blue.



**COUGAR**  
Dark brown on pale blue.  
An awful yell.



**ECHO BAND**  
Pale on dark blue.  
*Ek-ho*

**BUGLING ELK**

Dark brown on rose red.

**COYOTE**

Brown and white on yellow.

*Yoop-yoop-yah-yow* in ascending side like a coyote's bark.**FIRE-MOUNTAIN BAND.**

Blue mountain, red flames on black.

*Yip-yip-y. hoo-bang***MOOSE**

Black on pale green.

A long smooth bellow.

**CAT-IN-THE-NIGHT**

Gray on black.

*Prow-ya***FLYING EAGLE**

White and brown on pale blue.

*Kek-Kek-Kek***WHITE MOUNTAINS or SNOW PEAK BAND**

White on dark blue.

*Rumble-shshsh***THUNDERBIRD**

Dark blue on yellow, white head.

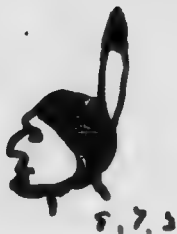
Lightning comes from his eye.

**ARROW FOOT**

Red on blue field.

**SUNRISE BAND**

Yellow on pale blue.

Call a loud *Yo-ho, yo-ho, yo-ho* on ascending notes.**MOHAWK**

Black and red on olive green, Indian whoop.

**COON**

Gray with black marks on a red ground.

A high pitched quavering

*Hoo-oo-oo-oo***SUNSET BAND**

Red or yellow on blue-green or pink.

A long descending whistle.

# Organization

17



**LIGHT HEART**  
Red on pale blue.



**KINGSNAKE**  
Yellow with red spots, ground  
pale green.



**SHINING MOUNTAIN**  
Dark blue semi-circle with  
white mountain.



**ARROWHEADS**  
Turquoise blue arrow on  
dark brown.  
*Pins*



**WAR QUILL**  
White feather black tip and  
red tuft on yellow.



**YELLOW QUILL**  
All yellow with black tip on  
pale green.



**BLUE SKY**  
Large blue circle on white.



**FLYING PATROL or  
FLEET FOOT or  
WINGED HEEL.**  
White on red.



**THE SEVEN STARS**  
Pale pink on dark blue.



**OJIBWA**  
Orange on pale blue  
Peace Whoop.



**DEERFOOT**  
Yellow and black on blue-  
green.  
*Pat-Pat-Pat*



**RED-HAND**  
Red hand on gray.  
*Ho*



**RED ARROW**  
Red on white.  
*Zip-zip*



**HORSESHOE**  
Blue on pale yellow.  
*Clink-Clink*



**SNAPPER BAND.**  
Red on turquoise.  
*Snap-ouch*



**BLACKFOOT**  
Black and red.  
War Whoop.

## REQUIREMENTS IN THE BIG LODGE

### Wayseeker

To qualify for a Big Lodge—that is, to enter as a Wayseeker one must:



Wayseeker

- Be over twelve years of age.
- Know the twelve laws and state the advantage of them.
- Take one of the initiations.
- Be voted in unanimously by other members of the group.
- Having passed this, the candidate becomes a Wayseeker and receives the Big Lodge Badge of the lowest rank, that is, with two green tassels on it.
- The next higher rank is that of Pathfinder.

### Pathfinder

To win the rank of Pathfinder, the Wayseeker must know the "Star-Spangled Banner" or in Canada "The Maple Leaf" and take the following fifteen tests:



Pathfinder

1. Have one month's honorable service without a stain on record in Big Lodge as Wayseeker.
2. Walk five miles in two hours and write a satisfactory account of it.
3. Swim twenty five yards.
4. Know the Pole Star, the Two Dippers, and at least three of the other constellations.
5. Know ten forest trees, leaf and trunk.
6. Know ten wild flowers by observation.
7. Know five edible wild plants *or* transplant successfully four kinds of trees, flowers or plants.
8. Know fifty signs of the sign language.
9. Know ten totems as found in the city.
10. Tie five of the following standard knots and know their uses; double bow, running noose, square, whip a rope's end, timber hitch, bowline, hard loop, clove hitch, eye splice.
11. Make a bird box or restaurant, according to specifications of the Audubon Society. See that it is properly placed.
12. Prepare of wildwood materials only, and light three successive camp fires with three matches; *or* supply sufficient and proper firewood for cooking six meals.
13. Understand and demonstrate the use of hatchet and

whittling knife, under adult guidance; *or* understand and demonstrate use of hammer and saw (such as putting a shelf in a wooden box).

14. Enlist a new member in one of the Lodges.

15. Help daily for one week in home duty for the joy of unbargaining service.

When these tests have been satisfactorily passed the member is called out in Council, the Guide in charge tells of it in as much detail as is needed. Then taking a pair of scissors or a knife, announces:

"Now, therefore, acting for the Council I clip from this member's badge, the first emblem of inexperience, the tassel of green, and consign it to the flames."

Then shaking hands with the candidate says:

"I now declare complete your installation as a Pathfinder."

## Minisino

To win the rank of Minisino (meaning "A Boy Tried and Proven") the following tests must be taken.



Minisino

1. Make a rubbing stick fire.

2. Sleep out three nights, also cook a meal, with no utensils but a hatchet and what one can make with it, *or* cook three digestible meals by camp fire for not less than three persons.

3. Know the essentials of camping, including: where to camp, how to put up a tent and prepare for rain, where and how to erect a latrine. (See Camping, Section III.)

4. Know how to make of wildwood materials either a comfortable rainproof shelter suitable for overnight *or* know how to make a dry, comfortable camp bed.

5. Make a comfortable bed *or* a serviceable mat of rushes, grass or wood fibre. If wildwood material is not obtainable, straw, hay or corn husks may be used.

6. Single paddle a canoe (if one can swim), *or* row a boat one-half mile in fifteen minutes.

7. Take an eight mile hike, most of which is in the country, and write a satisfactory account of it.

8. Know twenty-five birds—ten of them from observation in street, field or woods.

9. Know ten native quadrupeds.

10. Know elements of life-saving—breaking grips, getting body to shore, resuscitation; and ready help for cuts, poisoning, fainting, dislocation, and sprains as found on page 142.

11. Have, by examination and practice, an acquaintance with the essentials of etiquette, as used in the Woodcraft Council and in daily living.

12. Run a Council and teach a dance or song.

13. Spend at least three hours a week for two weeks helping in home duties.

14. Keep temper quite unruffled *or* speak no evil of any one for one moon.

15. After consultation with the Guide, abstain from besetting sin for two months.

Now, as before, the Guide testifies in Council, the Pathfinder has the last green tassel cut from his Badge and is installed as Minisino of the Big Lodge.

### Titles and Officers

**HEAD GUIDE**—One at least twenty-one years of age, of good character, associated with some Woodcraft Tribe and actually giving time to leading in Woodcraft work. Also qualified (willing to qualify within a year as Gleeman or Council Leader) (See Degrees.) Is responsible to Headquarters for work of Tribe.

**GUIDE**—One at least eighteen years of age, of good character, willing to give time to leading a Band in Woodcraft work. Commissioned by Headquarters upon recommendation of the Head Guide.

**SHAMAN**—a Guide who has qualified as Camper, Camp Doctor, Camp Cook, and Council Leader.

**CHIEF**—A member of a Tribe appointed as Leader by the Guide or elected by the members of the Tribe with the Guide's approval. He acts as the representative of the members (should learn to run the Council), and coöperates with the Guide in conducting the work of the Tribe.

**BAND CHIEF**—A member of one of the Bands appointed as leader by the Guide or elected by the members of the Band with the Guide's approval. He acts as the representative of the members and coöperates with the Guide in conducting the work of the Band.

**TALLY KEEPER**—A member of the Tribe appointed by the Guide, or elected by the Tribe with the approval of the Guide, to act as Secretary and keep the Tally.

**WAMPUM KEEPER**—A member of the Tribe appointed by the Guide, or elected by the Tribe with the approval of the Guide, to act as Treasurer. Sometimes it may be wise to have one member hold both this and the preceding office.



## Organization

21

**BAND TALLY AND WAMPUM COLLECTOR**—A member of a band appointed by the Guide or elected by the Band with the approval of the Guide to act as Secretary for the Band and to collect dues of the members. Reports to the Tribal officers.

**WAYSEEKER**—The lowest rank in the Big Lodge.

**PATHFINDER**—The next or second rank in the Big Lodge.

**MINISINO**—The highest rank in the Big Lodge.

**FATHER AND MOTHER COUNCILLOR**—Adult relative or friend, interested in work, welfare, and support of the Tribe, but not necessarily giving as much time as a Guide.

**SAGAMORE**—A member who has achieved twenty-four Coups. Must be at least 14 years of age and a Minisino.

**GRAND SAGAMORE**—One who has achieved twenty-four Grand Coups.

**SACHEM**—A member who has achieved forty-eight Coups.

**GRAND SACHEM**—A member who has achieved forty-eight Grand Coups.

**FIRE KEEPER**—A member of a Band or Tribe appointed by the Chief to attend to the Council Fire for any given period.

**WATCH LODGE**—It has been found very valuable in some cases to have a group of selected members of the Tribe who will assist at times when discipline is necessary. This group may be called by any appropriate name, but should be called upon only in emergency.

**BAND**—A group of not less than five nor more than ten members under a Band Chief and a Guide.

**TRIBE**—A group of not less than two Bands, that is, at least ten members, chartered from Headquarters and empowered to confer Badges and Degrees according to the Laws of the Woodcraft Manual under a Chief and a Head Guide appointed by Headquarters. The maximum number in a Tribe is fifty members.

**TRIBE COMMITTEE**—A committee of three or more adults who cooperate with the Guide and guarantee the continuance of the tribe.

## Badges

The symbol of the Woodcraft League is a white shield with blue horns.

That of the Boys' Big Lodge has in addition a blue teepee with a white doorway on it.

That of the Little Lodge has an incomplete circle and a small brown lodge on it.

The crown on the Chief's badge is in each case blue.

That of the Coup is a black and white eagle feather embroidered in wash silk.

That of the Grand Coup is the same with a red tuft on the end.

That of the Sagamore has a crown with five points.

That of the Grand Sagamore, Sachem, and Grand Sachem is made in the same way as the Sagamore badge with the addition of red tufts, etc.

The badges for degrees are red squares (with a design in black) and blue horns.

That of the Guide has a trail on it.

That of the Shaman has on it the four mountains of attainment.

The robe badge for degree is the Zuni Coil in the centre of which is the emblem of the degree.

The Head or Hat Band for the Boys' Big Lodge is composed of blue squares on a white background.

That of the Little Lodge has brown squares with a white background.

### The Meaning of the Badges

The badge of the Woodcraft League is an ancient Indian totem composed of a pair of horns attached to a shield; the horns meaning "attack" and the shield "defense"; the idea symbolized being, "trained and ready." This is used by all in the League, whether boy or girl, Little Lodge or Adult.

The blue on the badge is to remind us of "Blue Sky," which is our watchword. For under the blue sky, in the sunlight, we seek to live our lives; and our thoughts are of "Blue Sky," for that means "cheer"; and when there are clouds, we know that the blue sky is ever behind them, and will come again.

On the boy's badge the blue teepee reminds us that the teepee, the only movable dwelling that permits of any open fire inside, was the abode of the first woodcrafters of this country. It always faced the east with the sunrise that symbolizes the ever-renewed promise of the day. The fire within it was the symbol of the Great Spirit and the smoke to them was the established emblem of prayer, ascending from the hearth to the far above.

The two green tassels are the badges of inexperience; and when by achievements the Woodcraft boy is entitled to have them removed, the meaning of the symbolism is as evident as it is happy.

# Organization

23

## WOODCRAFT BOYS' BADGES



Wayseeker



Pathfinder



Minisino



Chief



Sagamore



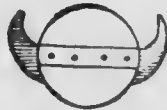
Grand Sagamore



Sachem



Grand Sachem



Guide



Shaman



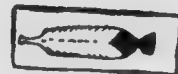
Coup Badge



Degree  
Badges



Zuni Coil  
Blanket Degree Badge



Grand Coup



Wood Brownie



Water Brownie



Fire Brownie



Chief

(LITTLE LODGE)



Head Bands

### Salute



The salute is given with the right hand with all the fingers closed to the palm, except the little finger and the thumb and the hand raised level with the head.

### The Meaning of the Council Ring

Why do we sit in a circle around the fire? That is an old story and a new one.

In the beginning, before men had fire, they were forced to sit up in the trees and shiver all night as they looked down at the shining eyes in the bushes below—the eyes of fierce creatures ready to destroy them.

But fire, when it was found, enabled man to sit on the ground all night, for the brute beasts feared it and stayed afar. It afforded him protection, warmth, a place of meeting and comfort. All the good things that we think of when we say "home" belong to the place around the fire. And when man began to think of such matters, he accepted the fire as the Great Mystery. Still later, as he realized that the Sun was the Great Mystery by day, he reasoned that there could not be two great mysteries; therefore, the Invisible Cause behind these two must be the one Great Mystery; and in this was the first thought of true religion.

All of these things are deep in our nature, ground in through the ages as we sat about the fire of wood that was our nightly guardian in the forest. And all of these ancient thoughts and memories are played on, whether we realize it or not, when we gather in a circle about the Council Fire.

Then, too, a circle is the best way of seating a group. Each has his place and is so seated as to see everything and be seen by everybody. As a result each feels a very real part in the proceedings as they could not feel if there were corners in which one could hide. The circle is dignified and it is democratic. It was with this idea that King Arthur abolished the old-fashioned long table with two levels, one above the salt for the noble folk and one below for the common herd, and founded the Round Table. At his table all who were worthy to come were on the same level, were brothers, equal in dignity and responsibility; and each in honor bound to do his share. The result was a kindlier spirit, a sense of mutual dependence.

These are the thoughts in our Council Ring. These are among the reasons why our Council is always in a circle and if possible

around the fire. The memory of those long-gone days is brought back again with their simple, reverent spirit, their sense of brotherhood, when we sit as our people used to sit about the fire and smell the wood smoke of Council.

### Ceremony of Grand Council

When the members have familiarized themselves with the work they will want to invite their friends and hold Grand Council, introducing various things, such as dramatic dances, songs, etc., in addition to the regular Doings in Council. The following order is suggested for the opening:

When all are assembled and seated, give a short roll of the drum.

Then let the Guide or the appointed Chief of the Council call out: "My friends, give ear—we hold a Council"; or if the Indian words are preferred, "Yo-hay-y- Yo-hay-y-v; Meetah Kola Nagoonpo Omnee-chee-yaynee-chopi.

If one of the members is to make the fire with the rubbing sticks, the Chief, still standing, now says in a loud, clear voice:

"Now light we the Council Fire after the manner of the forest children, even as Wakonda himself doth light his fire—by the rubbing together of two trees in the storm wind, so cometh forth the sacred fire from the wood of the forest."

(He uses the drill; the smoke comes, the flame bursts forth.)

"Now know we that Wakonda the Great Spirit hath been pleased to smile on His children, hath sent down the sacred fire. By this we know He will be present at our Council, that His wisdom will be with us."

Four torches are there on our symbol fire. And from them reach twelve rays—twelve golden strands of this the Law we hold.

### From the Lamp of Fortitude Are These

*Be Brave;* for fear is in the foundation of all ill; unflinchingness is strength.

*Be Silent.* It is harder to keep silence than to speak in the hour of trial, but in the end it is stronger.

*Obey;* for obedience means self-control, which is the sum of the law.

### And These Are the Rays from Beauty's Lamp

*Be Clean;* for there is no perfect beauty without cleanliness of body, soul, and estate. The body is the sacred temple of the

spirit, therefore reverence your body. Cleanliness helps first yourself, then those around, and those who keep this law are truly in their country's loving service.

*Understand and respect your body.* It is the temple of the spirit, for without health can neither strength nor beauty be.

*Protect all harmless wild-life* for the joy its beauty gives.

### And These Are the Rays from the Lamp of Truth

*Hold your word of honor sacred.* This is the law of truth, and any one not bound by this cannot be bound; and truth is wisdom.

*Play Fair;* for fair play is truth and foul play is treachery.

*Be reverent. Worship the Great Spirit, and respect Worship of Him by others* for none have all the truth, and all who reverently worship have claims on our respect.

### And These Are in the Blazing Lamp of Love

*Be Kind.* Do at least one act of unbargaining service every day, even as ye would enlarge the crevice whence a spring runs forth to make its blessings more.

*Be Helpful.* Do your share of the work for the glory that the service brings, for the strength one gets in serving.

*Be Joyful.* Seek the joy of being alive—for every reasonable gladness you can get or give is treasure that can never be destroyed, and like the springtime gladness doubles, every time with others it is shared.

Then use the regular ceremony of the Council cutting short the business unless it is very interesting. After closing by singing the Omaha Tribal Prayer, the Chief announces: "Our Council is ended, but our Council Fire burns; now, therefore, lest this blessing become a danger, it is the duty of our Fire Keeper to utterly quench our Council Fire or hedge it about with an impassable barrier lest it become a source of fire."

### Closing

Sometimes the Council is closed with another song in which case the "Omaha" is sung after the lighting of the fire.

### The Council Robe

A number of the members of the Woodcraft League have found the Council Robe at Grand Council both comfortable and picturesque.

It is usually a blanket of light weight material, decorated with badges for degree or coups when they have been won, also totems of the band, the tribe, etc.

## CONSTITUTION OR THE LAWS FOR THE RULING OF THE TRIBE

### I. Name

This Tribe shall be called "The ——— Tribe of the Big Lodge of the Woodcraft League."

### II. Purpose

Our purpose is to learn the outdoor life for its worth in the building up of our bodies and the helping and strengthening of our souls; that we may go forth with the seeing eye, and the "thinking hand" to learn the pleasant ways of the woods and of life, that we be made in all wise masters of ourselves; facing life without flinching, ready to take our part among our fellows in all the problems which arise, rejoicing when some trial comes that the Great Spirit finds us the rulers of strong souls in their worthy tabernacles.

### III. Who May Enter

Those who are twelve years of age, who know the law, who are acceptable to the Band and who can show themselves worthy, according to an established initiation. All begin at the lowest rank.

Those who would enter must be admitted to a Band which is already part of a Tribe, or is afterward made such.

### IV. Councils

A Council of the Tribe should be held in the first part of each moon or oftener.

Each Band should hold a weekly meeting.

The yearly Council for the election of officers shall be held on the first sun of the Leaf Falling Moon (October) or as soon after as possible.

The moons are: Snow (Jan.), Hunger (Feb.), Crow or Wakening (March), Grass (April), Planting (May), Rose (June),

Thunder (July), Red (Aug.), Hunting (Sept.), Leaf-falling (Oct.), Mad (Nov.), Long-night (Dec.).

Special Council may be called by the Chief with the approval of the Guide, and must be called by him upon the written request of one fourth of the Council or one third of the Tribe.

A quarter of the whole number shall be a quorum of the Council or Tribe.

## V. The Rulers of the Tribe

(See Titles, page 20)

The *Head Guide*, responsible to Headquarters, is chief ruler. *Guides*, responsible to the Head Guide.

*Chief*, elected by the whole Tribe, or sometimes appointed by the Guide; this officer should be strong and acceptable, for the Chief is the leader, must enforce the laws, has charge of the standard which bears the totem of the Tribe, and is the representative of the members.

The *Second Chief* takes the Chief's place in case the latter is absent; is elected by the whole Tribe.

*Tally Keeper*; elected by the members, or appointed for one year by the Guide or Chief, and is charged with keeping the records. Enters nothing in the records, except as commanded by the Council; should be an artist.

*Wampum Keeper*. Appointed for one year by the Guide or elected by the members to keep the records and public property of the Tribe. Should have a lock-box or small trunk to keep valuables in.

Sometimes one member holds more than one of these offices.

The Guides appointed by Headquarters, the Tribal and Band Chiefs, and the Sachems and Sagamores by right of their Honors, together form the High Council or Governing Body of the Tribe.

All disputes, etc., are settled by the Guide, the Chief, and Council. The Council makes the laws and fixes the dues. The Chief enforces the laws with the support of the Guide.

All rulers are elected or appointed for one year, or until their successors are chosen. The election to take place on, or as soon as possible after, the first Sun of the Leaf-falling Moon (October 1st).

Honorary or Life Members have been elected by some Tribes as marks of distinction or affection.

(Whenever in doubt, follow the National Constitution.)



*Vow of the Head Chief.* (To be signed with name and totem, if any, in the Tally Book.) I give my word of honor that I will maintain the Laws, see fair play in all the doings of the Tribe, and protect the weak, and I will not ask any one to do what I am not willing to do myself.

*Vow of each member.* (To be signed with the name and totem, if any, in the Tally Book.) I give my word of honor that in all matters of Woodcraft I will obey the Chief and Council of my Tribe, and if I fail in my duty I will appear before the Council when ordered, and submit without murmuring to their decision.

## VI. Changes of the Law

Changes of this code, in harmony with the National Laws, may be made at any Council by a two-thirds vote of all the Tribe, if due notice of the proposed change is given to all members seven suns before.

## VII. Dues

Dues shall be: first . . . a year; second, assessments made on all by the Council for Tribal purposes; and third, when necessary, the Council shall assess those taking part in camp.

The initiation fee for newcomers shall be . . . which shall include the first year's dues, but shall not include the assessments.

## VIII. Confidential

It is charged that all keep secret the confidential discussions of the Council.

## IX. Laws and Punishments

The laws are as already given (p. 9).

Punishments are meted out by the Chief and Council, after a hearing of the case. They consist of:

Renewal of initiations.

Exclusion from the games, meetings or, if in camp, from the boats for a time, or of fines, etc.

The extreme penalty is "death"; that is, banishment from the Tribe.

### The Band

Each Band of not less than five nor more than ten members elects its Chief for one year, or until the successor is elected. The Band also elects the Second Chief, to act in absence of the Chief and a Tally Keeper, who should be an artist, for it is his office to keep the records, the Winter Count, and the Tally Robe of the Band, and these should be embellished in all ways. A Wampum Collector, also, is needed, and may be elected though the Chief may fill the office unless otherwise arranged. The other members, even those of lowest rank, sit in the Council of the Band without election.

Two or more Bands unite to form a Tribe.

Every member of the Band is a member of the Tribe, and uses the Totem and Call. But the Band has also a Totem and a Call of its own.

The Band keeps its own Tally, and raises what dues it pleases. But it also pays dues to the Tribe and is represented in Tribal Council by its Chief and Nobles (if any) and such Tribal officers as it can elect.

### The Inbringing of a Newcomer

Those who would learn the life, and take the vows, of Woodcraft, must enter by the lowest stage of the Lodge. And before being admitted must as already set forth (p. 18):

1. Be of right age (i. e., twelve for Big Lodge).
2. Know the laws of the Lodge, also the hand sign and the salute.
3. Must be proposed, seconded, and have name posted for seven suns on the bulletin board (Totem pole) or tally book and be given an Initiation Test as set forth in the trials of fortitude, on page 10.
4. Must have passed the given initiations and if found worthy may take the vow in this wise: The Guide, or whoever is conducting the ceremony, will say at the time appointed for the inbringing, "There is a new member to be taken in at this Council, by name. . . . Let the would-be member stand up. This candidate, I am told, has duly qualified in the four tests of fitness, being of right age, knowing the laws of the Lodge, having been duly posted for seven suns, having faced the initiation of. . . ."

"It now remains to vote for or against the admission of this member, and to the end that there may be no hindrance to freedom of speech, the candidate is asked to leave the Council and roam in the distant woods, till this matter shall have been decided."

In the discussion all the Tribe may take part, *but only the Band interested may vote*; for the member enters the order by joining a Band. In the voting one blackball is enough to exclude. If the candidate is voted down it is wiser to defer the announcement till a later Council and meanwhile let the unlucky one know privately of the decision. In case the favorable unanimous vote is given the two backers go out into "the woods" and return with the successful candidate.

Standing before the Guide in open Council he shall be questioned and instructed, so he shall know more fully of the sacred purpose of the League. Then the Guide shall say:

"Is it your serious wish to become a member of the Woodcraft League?"

*Answer:* "It is."

"We have already learned that you are fully qualified in the four proofs of fitness by being over twelve years of age, by learning the law of the Lodge, by (here name the initiation taken), by being found acceptable to the Band you wish to join. Is it not so?"

*Answer:* (by the officer who knows): "Yes, O Chief, I can vouch for the candidate."

"You know our laws; we shall take them one by one."

"Do you promise obedience to the Council?"

*Answer:* "I do."

(And so, through the twelve laws, whereby the member is bound to obedience, courage, cleanliness, health-seeking, to cherish the Great Spirit's gifts; and to service, kindness, fair-play, joy, silence, reverence, honor.)

"And what are the four lights from which these laws do emanate?"

*Answer:* "They are *Fortitude, Beauty, Truth, and Love.*"

"And whence did these four receive their light?"

*Answer:* "From the Light of the Central Fire which is the emblem of the Great Mystery by which we symbolize that all Good comes from the one Great Source."

The Guide then says: "Raise your hand and say after me: 'I give my word of honor that in all matters of the League I will obey the Chief and Council and the laws of my Tribe, and if at any time I fail in my duty I will appear before the Council,

when ordered, and submit without murmuring to its decision.'

"I receive you into our Order, and by this badge I formally signify the same." (Now the Guide pins the badge over the candidate's heart, or on his arm, shakes hands and says):

"Now I declare your installation complete as a Wayseeker in the . . . Band of the . . . Tribe, which is of the Big Lodge in the Woodcraft League."

Thus one enters the Tribe and the League by joining a Band.

### Installation of the Higher Ranks

Whenever a member has won the right to promotion the evidences are first submitted to the High Council or the Committee they appoint, and if quite satisfactory the installation is made at the next Council or Grand Council, whichever is most convenient or desirable.

When the programme has gone as far as "badges to be claimed," the Chief of the applicant's Tribe or Band shall announce the claim. The Committee who have examined the evidence now stand up to support the claim. The Guide or Chief at the Council Rock (in the chair) asks "if any do challenge the claim," and if none, briefly describes the qualifications and their value in our work, then says: "Acting for the Council, therefore, I now cut from the Horned Shield the green tassel, the badge of the rank this member is leaving, and announce that his installation is complete as a . . . of the . . . Lodge.

Then clips off the green tassel, casts it into the fire, and shakes hands with the successful one, who retires to his seat amid loud applause.

### The Conferring of Badges for Coups and Degrees

(See Section IV)

When in the Council the Guide or Chief, at the Council Rock, announces that now is the time to claim badges, each who is prepared with a properly filled out blank (got from Headquarters) stands up till bidden to speak, then steps forward and says:

"O Chief, in behalf of . . . of the . . . Band, I claim a coup (Grand Coup or Degree as it may be) for . . .

and here is the testimony of my witnesses," handing over the Record.

The Chief of the Council calls out loudly: "Here . . . claims . . . and here is the evidence fully witnessed by . . . and . . . all persons of good standing and able to speak with authority in this matter. The Committee has already looked into the case and endorsed the application. What is the pleasure of the Council?"

Some one rises and says: "O Chief, there can be no question of the justice of this claim. I move that it be allowed."

Another says: "I second that, O Chief." The Chief says: "Moved and seconded; all in favor say 'How,' contrary say 'Wah.' The 'Hows' have it, the claim is allowed."

The Chief then says: "In behalf of the Council I bestow on you this eagle feather or this degree badge as a symbol of your achievement."

This paper is now signed by the Chief in the chair and becomes the property of the recipient; a record of it in the Tally Book is all that the Tribe needs.

## List of Sagamores and Sachems

During the fourteen years since the Order was founded only twenty-three have won the Sagamore's Crown, viz:

Sagamore	Plenty Coups,	1905	Douglas A. Miller, Greenwich, Conn.
"	Deerfoot,	1906	Lorraine M. Wood, Rutherford, N. J.
"	Deerslayer,	1906	Willis R. Monroe, Cos Cob, Conn.
"	Silver Fox,	1908	S. Miller Jordan, Rutherford, N. J.
"	Kingbird,	1910	James F. Gilkinson, Middletown, Conn.
"	Eagle-eye,	1911	George L. White, Cos Cob, Conn.
"	Little Thunder,	1912	Albert E. Finiels, Cos Cob, Conn.
"	Little Beaver,	1912	Richard L. Burdsall, Port Chester, N. Y.
"	Karonawa,	1912	Paul Cecil Spoffard, Port Chester, N. Y.
"	Ningonit,	1912	Edward D. Graber, Greenwich, Conn.
"	Onjima,	1913	Alexander P. Leverty, Bridgeport, Conn.
"	Moskuas,	1914	Clive C. Day, Summit, N. J.
"	Rolling Thunder,	1914	James C. Maples, Port Chester, N. Y.
"	Little Eagle,	1914	Samuel Comley, Port Chester, N. Y.
"	Kijika,	1914	Richard A. Reynolds, Bridgeport, Conn.
"	Wapoo,	1914	Robert G. Hull, Bridgeport, Conn.
"	Airtalk,	1914	Clifford Appleton, Bridgeport, Conn.
"	Ishka Chissakid,	1914	Harvey C. Went, Bridgeport, Conn.
"	(No name.)	1914	Horace T. Smith, Bridgeport, Conn.
"			(Resigned.)
"	Wita-tonkan	1916	F. R. Hoisington, Jr., Rye, N. Y.
"	Tatanka	1916	John Louis Liecny, Brookline, Mass.
"	(No name)	1916	Donald Colpitts, Kineo, Me.
Sachem	Migwanag	1915	Lewis F. Hall, Bridgeport, Conn.

### Winning a Name

The bestowal of the ceremonial name is a serious matter, and the highest honor within the gift of the Council.

In the Woodcraft League the ceremonial name is given only when a member measures up as the finest type of Woodcraft Boy.

In a tribe of fifty not more than two or three ceremonial names would ordinarily be won during a year. Any one applying for a ceremonial or honor name is thereby proven unworthy of it. The suggestion should come from those around him after the life and conduct of the member shows that he has attained to a certain high measure of power and self-restraint, or especial achievement that manifests the excellence of the spirit within. The name is almost never given for a single exploit, but rather for a career of fortitude or much high achievement in some department.

When the Council, ever watchful, has decided that such a one, by his steady and sterling gifts, is entitled to a name, the best way is to find out privately if this person wishes for the honor, next what particular name or idea is appropriate and acceptable to all concerned. If desired, the Council may get from Headquarters a suitable list of names from which to make selection.

and

only  
craft

mes  
or a  
it.  
life  
to  
cial  
hin.  
her  
de-

a  
he  
he  
ac-  
om  
ec-

## SECTION II

### TRIBE AND COUNCIL ACTIVITIES

Suggestions on Tribal Work  
Games  
Songs

Dances  
Plays, Pageants, and Masques  
Campfire Stories and Poems





## SECTION II

### TRIBE AND COUNCIL ACTIVITIES

(This section aims to help Woodcraft Tribes in running their Council meetings. The subjects which follow are intimately associated with the Councils, though much of the material in "Things to Know and Do" also will be of great value.)

One day after a heavy snowstorm the children of a country school were wondering what they would do at recess time. Some one suggested that they go out in a neighboring field, stand with their backs to the large oak tree in the centre, and then see who could walk the straightest line to the fence. This they did, but they found that only one of the number had walked a straight line—the rest had turned aside for stumps or holes. And when they asked the boy why he had been able to walk such a straight line he answered, "I kept my eye on a post and walked right toward it."

There are so many interesting things that a Tribe can do that there is a danger of missing some of the best things unless the Tribe has a plan. Make sure then that the meetings give proper attention to the various interests of the Tribe, and see that each member has a chance to grow. Every meeting should be carefully planned so as to give opportunity for tribal business, to have a fine time, and to learn some new thing. And, of course, the same close attention and enthusiasm will be given to each subject during the time it has right of way. Each member enters as a Wayseeker and hopes to become a Pathfinder, then a Minisino, and finally to win a number of Coups and Degrees. It is wise to decide on the length of time it should take for all the Tribe to pass the test for Pathfinder and allot to each meeting its share of subjects to be covered. In this way each member will have a chance to grow with the others.

It is necessary that every member of the Tribe "play the game." The biggest step man ever took in his long history of advancement was when he learned to coöperate with others. Insist on team work. Discourage quitters, whether it be in games, singing, tribal business, or in the learning of new things. Make them see that the whole value of the Tribe will depend

upon the amount of loyalty and team work each member puts into it, for

"The strength of the pack is the wolf;  
The strength of the wolf is the pack."

Here are a few suggestions for covering the tests for Pathfinder in three months and the Minisino in five. It can be done though your Tribe may prefer to cover the ground more slowly. The numbers indicate the numbers of the tests. These suggestions cover only the tests. At every Council you should introduce songs, dances, primitive history, legends, stories and natural narratives, handicraft, etc.

### Pathfinder

(Three months)

#### First Month:

First week: Organization council; choose name, totem, and officers, explain purpose of Woodcraft Boys ceremony, etc.

Second week: Above continued—Laws, give out initiations.

Third week: Swear in members and officers; Trees (5); Hike and account (2).

Fourth week: Knots (10).

#### Second Month:

First week: Stars (4).

Second week: Suggestions—Ten Totems (9); Enlist new members (14); Home help (15); Swim (3).

Third week: Wild flowers (6)

Fourth week: Check up work done—optional work.

#### Third Month:

First week: Sign language (8).

Second week: Hatchet and knife (13); Prepare wood fires (12).

Third week: Bird box or restaurant (1).

Fourth week: Sign language (8).

Fifth week: Edible wild plants (7).

### Minisino

(Five months)

#### First Month:

First week: Rubbing stick fire (1).

Second week: Birds (8).

## Tribe Activities

39

Third week: Hike and account (7).

Fourth week: Tent and latrine (3).

### *Second Month:*

First week: Life Saving, first aid (10).

Second week: Life Saving

Third week: Life Saving

Fourth week: Life Saving and home help (13).

### *Third Month:*

First week: Birds (8)

Second week: Stick bad

Third week: Rainproof shelter

Fourth week: Review of the month—Etiquette (11), Tem-

### *Fourth Month:*

First week: Animals (6)

Second week: Run Camp

Third week: Sleep out (2); Camp (6).

Fourth week: Character (1)

### *Fifth Month:*

First week: Birds—review

Second week: First Aid—Life Saving—review.

Third week: Animals and birds—review.

Fourth week: Campcraft—review.



## **COUNCIL GAMES**

### **Council**

<b>Tub Tilting</b>	<b>One-legged Chicken Fight</b>
<b>Leg Wrestle</b>	<b>Strong Hand</b>
<b>Navajo Feather Dance</b>	<b>Stung</b>
<b>Cock Fighting</b>	<b>Talk-fest</b>

**Solemnity**

**Also many of the Outdoor and Indoor Games**

### **Outdoor**

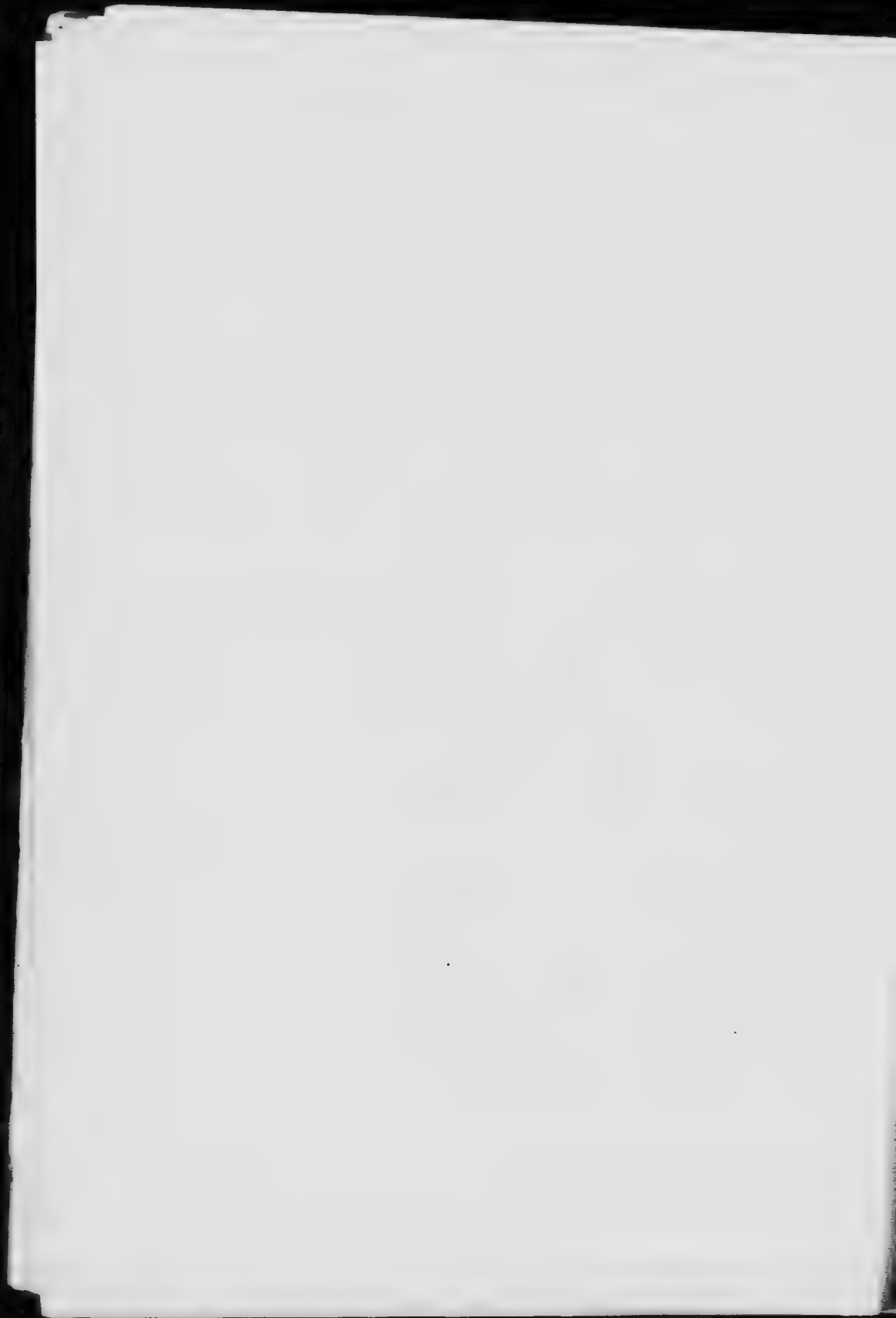
<b>Watching by the Trail</b>	<b>Far Sight</b>
<b>Trailing</b>	<b>Home Star</b>
<b>Apache Relay Race</b>	<b>Hostile Sp</b>
<b>Chinese Tag</b>	<b>Tree the Coon</b>
<b>Bat Ball</b>	<b>Rat on the Lodge</b>
<b>Scouting</b>	<b>Water-boiling Contest</b>
<b>Quick Sight</b>	<b>Medley Scouting</b>
<b>Still-hunting the Buck</b>	

### **Water**

<b>Spearing the Great Sturgeon</b>	<b>Canoe Tag</b>
<b>Boat and Canoe Tilting</b>	

### **Indoor**

<b>Odds and Evens</b>	<b>Geography</b>
<b>Blind Man's Buff</b>	<b>Menagerie</b>
<b>My Vacation</b>	<b>Menagerie Party</b>
<b>Names by Topics</b>	<b>Portrait Party</b>
<b>Fortune</b>	<b>Magic Music</b>
<b>Guessing Game</b>	<b>Fireside Trick</b>
<b>Kingdom</b>	<b>Lone Star Trick</b>
<b>Feather Football</b>	



## COUNCIL GAMES

Many of the tribes have found it best to restrict the council games to the Council Ring.

### Tub Tilting

Tub Tilting is immensely popular at night by the blazing campfire as well as in the city at the indoor councils. It is an exciting game, tests the ability of the contestants, and can be made quite scientific. It is usually the most popular game in the Woodcraft work and justly so.

For this we use two barrels, about flour barrel size, or better still, two stools made with a heavy plank top about eighteen inches in diameter and supported by four strong legs spreading widely at the bottom. The top of the stool should be two feet off the ground. These are set level, exactly a spear length apart, centre to centre.

Each fighter takes his place on a stool, and his game is to put the other off the stool. To prevent accidents, we have usually a catcher behind each man. The umpire stands alongside, near the middle.

It is a foul to use the spear as a club, or to push below the knees, or to push the stool, or to seize the other man's spear in your hand.

A foul gives the round to the other man.

The round is over when one man is off or when his spear touches the ground.

It is a draw when both go off together.

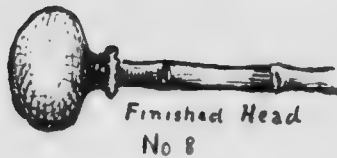
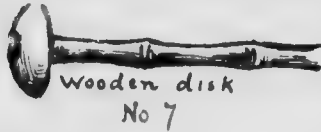
They change stools and spears after each round.

The battle is usually for three or five rounds.

I do not know of any good thrusts having been invented, but several good parries are well known. One is to use your spear-handle as a single stick. The best players parry much by wriggling the body. Often, when overbalanced, one can regain by spinning completely around.

The correct spears always used in our work are made thus: Take eight feet of the butt-end of any ordinary bamboo fishing-rod or, if anything, a little heavier than ordinary. Get a two-

inch plank of any light wood, and from this cut a disk three inches across, bevel off and round the edges. Bore a hole (about three fourths of an inch) in the middle, and put this on the top of the bamboo, so that it sets against a shoulder or knot. Drive a circular plug in the hollow of the bamboo for a wedge, and make all secure with one or two very thin nails driven in (No. 7).



Now pad the head an inch thick with the ordinary horsehair stuffing that is used in furniture, and bind all with strong burlap, sewing it at the seams, and lashing it around the bamboo with string (No. 8).

This completes the dry land spear. If for use in the water, make a final cover out of rubber cloth. This keeps the spear dry. A completed spear weighs about one and one half pounds.

Each tribe should have a half-dozen of these spears. They serve a number of purposes, some of them quite different from that originally intended.

I have seen a good many campers try tilting on the land or on the water and make an utter failure of it, by reason of the absurdly clumsy, heavy spears used. A green sapling was cut for handle, and the end tied up in a bundle of rags that was 18 inches through. This was hard enough to lift, when dry, and as it usually soon fell into the water and got sopping wet, its weight became trebled, and one could not use it as a spear at all.

### Indian Leg Wrestle

The contestants lie flat on their back on the ground or floor, facing in opposite directions, and lying side by side. They then lock arms and as the judge counts one, two, three they each raise the leg next to their opponent so as to be ready when the official says "three" to lock legs. Each tries to turn the other over backward. The one who succeeds in doing this wins. The game is to win two out of three rounds.

### Navajo Feather Dance

An eagle feather hung on a horsehair, so as to stand upright, is worked by a hidden operator, so as to dance and caper. The dancer has to imitate all its motions. A marionette may be used. It is a great fun maker.



## Cock Fighting

Make two stout sticks, each 2 feet long (broomsticks will do). Pad each of these on the end with a ball of rag. These are the spurs. Make an 8-foot ring. The two rivals are on their hunkers, each with a stick through behind his knees, his hands clasped in front of the knees, and the arms under the ends of the spurs.

Now they close; each aiming to upset the other, to make him lose his spurs or to put him out of the ring, any of which ends that round, and scores 1 for the victor. If both fall, or lose a spur, or go out together, it is a draw. Battle is for 3, 5, or 7 rounds.

## One-legged Chicken Fight

In this each of the two contestants stands upon one leg, holding up the other by grasping it at the ankle with the opposite arm behind the body. The other hand, also behind, grasps the supporting arm at the elbow. Points are scored as above, but it is defeat also to drop the up leg or to let go the arm.

## Strong Hand

The two contestants stand right toe by right toe, right hands clasped together; left feet braced; left hands free. At the word "Go!" each tries to unbalance the other; that is, make him lift or move one of his feet. A lift or a shift ends the round.

Battles are for best out of 3 or 5 rounds.

## Stung, or Step on the Rattler—Sometimes Called Poison

This is an ancient game. A circle about three feet across is drawn on the ground. The players choose sides, possibly one band against another, and place themselves alternately holding hands, to make a ring around this, and try to make one of the number step into the poison circle. He can evade it by side-stepping, by jumping over, or by dragging another into it.

Each one who steps in the circle is stung and sits down.

Sometimes we use a newspaper with a switch lying across it. When all on one side have been stung, the other side become the Rattlers, and may sting each of the others with the switch across their hands.

### Talk-fest

The Talk-fest, if properly handled, can be one of the most amusing of the Council Ring games. The idea is to have two good talkers talk simultaneously for not more than two minutes. Each selects his own subject. A jury of three persons is appointed. The contest is decided on the basis of continuity, humor, and general value of the speeches.

### Solemnity

The idea is to have one member challenge another to a test of ability to keep one's "face straight." Facing each other and in the presence of the crowd, each looks into the other's eyes to see which will smile or laugh first. Speech and gesture may be introduced if desired.

## OUTDOOR GAMES

### Watching by the Trail

This is a game we often play in the train, to pass the time pleasantly.

Sometimes one party takes the right side of the road with the windows there, and the other the left. Sometimes all players sit on the same side.

The game is, whoever is first to see certain things agreed on scores so many points. Thus:

A crow or a cow counts . . . . .	1
A horse . . . . .	2
A sheep . . . . .	3
A goat . . . . .	4
A cat . . . . .	5
A hawk . . . . .	6
An owl . . . . .	7

The winner is the one who first gets 25 or 50 points, as agreed.

When afoot, one naturally takes other things for points, as certain trees, flowers, etc.

### Trailing

A good trailing stunt to develop alertness and observation is managed thus: One boy wearing the tracking irons is deer.

He is given 100 beans, 30 slices of potato, and 10 minutes' start. He has to lay a track, as crooked as he pleases, dropping a bean every 3 or 4 yards and a slice of potato every 20. After ten minutes' run the deer has to hide.

The trailers follow him, picking up the beans and potato slices. Each bean counts 1 point, each slice of potato 2. The one who finds the deer scores 10 for it.

### **Apache Relay Race**

One band is pitted against another, to see who can carry a message and bring a reply in shortest time, by means of relays of runners. One quarter of a mile is far enough for an ordinary race. This divides up even 55 yards to each of eight runners. The band is taken out by the Chief, who drops scouts at convenient distances, where they await the arrival of the other runner, and at once take the letter on to the next, and there await the return letter.

A good band of 8 can carry a letter a quarter of a mile and bring the answer in about 3 minutes.

### **Chinese Tag**

Is like the regular game of tag with this difference: the one who is tagged must keep his hand on that part which was hit when he was tagged thus making only one free arm.

### **Bat Ball**

A regular baseball diamond is used, two teams are chosen of equal number. A volley ball or indoor baseball is used, preferably the former. One team is scattered anywhere inside the bases, the other team is up to bat. The boy bats the ball with his hand. The opposing team catching the ball he has batted tries to put the runner out by throwing the ball at the runner or by touching him with it. If the runner stands still he may not be put out, but the team trying to put him out must keep the ball passing continually; one of the players holding the ball is unfair. The boy running must reach the home plate before another batter comes up to bat.

### **Scouting**

Scouts are sent out in pairs or singly. A number of points are marked on the map at equal distances from camp, and

the scouts draw straws to see where each goes. If one place is obviously hard, the scout is allowed a fair number of points as handicap. All set out at same time, go direct, and return as soon as possible.

Points are thus allowed:

Last back, *zero* for traveling.

The others count one for each minute they are ahead of the last.

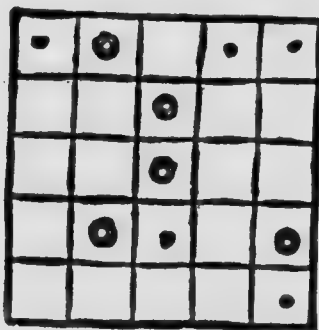
Points up to 100 are allowed for their story on return.

Sometimes we allow 10 points for each Turtle they have seen; 10 for each Owl seen and properly named; 5 for each Hawk, and 1 each for other wild birds; also 2 for a Cat; 1 for a Dog.

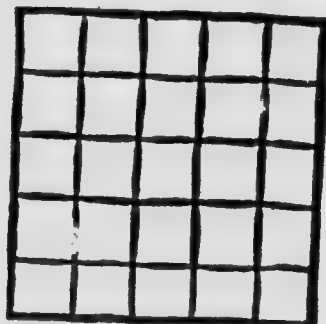
No information is given the scout; he is told to go to such a point and do so and so, but is fined points if he hesitates or asks how or why, etc.

### The Game of Quick Sight

Take two boards about a foot square, divide each into twenty-five squares; get ten nuts and ten pebbles. Give to one player one board, five nuts, and five pebbles. He places these on the squares in any pattern he fancies, and when ready, the other player is allowed to see it for five seconds. Then it is covered up, and from the memory of what he saw the second player



Quicksight Game

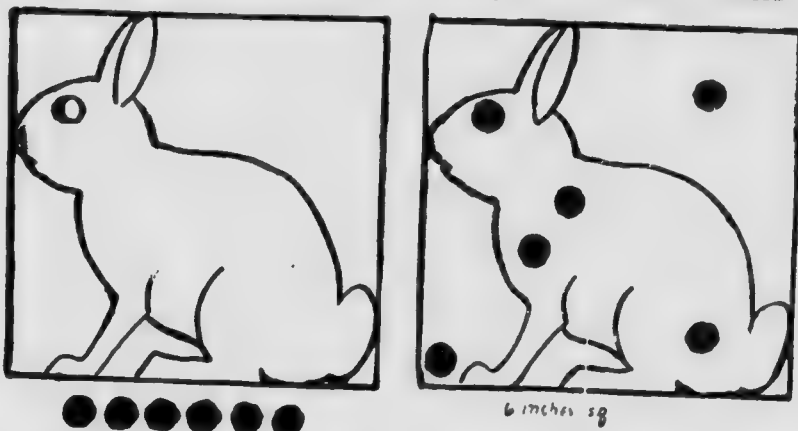


must reproduce the pattern on his own board. He counts one for each that was right, and takes off one for each that was wrong. They take turn and turn about.

This game is a wonderful developer of the power to see and memorize quickly.

## Far Sight, or Spot the Rabbit

Take two six-inch squares of stiff white pasteboard or whitened wood. On each of these draw an outline Rabbit, one an exact duplicate of the other. Make twenty round black wafers or



spots, each half an inch across. Let one player stick a few of these on one Rabbit-board and set it up in full light. The other, beginning at 100 feet, draws near till he can see the spots well enough to reproduce the pattern on the other which he carries. If he can do it at 75 feet he has wonderful eyes. Down even to 70 (done 3 times out of 5) he counts high honor; from 70 to 60 counts honor. Below that does not count at all.

## Home Star or Pole Star

Each competitor is given a long, straight stick, in daytime, and told to lay it due north and south. In doing this he may guide himself by sun, moss, or anything he can find in nature—anything, indeed, except a compass.

The direction is checked by a good compass corrected for the locality. The one who comes nearest wins.

It is optional with the judges whether the use of a time-piece is to be allowed.

## Hostile Spy

Hanging from the Totem pole is a red or yellow handkerchief. This is the Grand Medicine Trophy of the band. The Hos-

the spy has to capture it. The leader goes around on the morning of the day and whispers to the various members, "Look out—there's a spy in camp." At length he goes secretly near the one he has selected for spy and whispers, "Look out, there's a spy in camp, and *you are it.*" He gives him at the same time some bright-colored badge, that he must wear as soon as he has secured the Medicine Trophy. He must not hide the Trophy on his person, but keep it in view. He has all day till sunset to get away with it. If he gets across the river or other limit, he wins and they must pay an agreed ransom for the Trophy. If he is caught, he loses and has to pay a ransom for himself.

### Tree the Coon

This is an indoor game, founded on the familiar "Hunt the Thimble."

We use a little dummy coon; either make it or turn a ready-made toy rabbit into one, by adding tail and black mask, and cropping the ears. Sometimes even a little rag ball with a face painted on it.

All the players but one go out of the room. That one places the coon anywhere in sight, high or low, but in plain view; all come in and seek. The first to find it sits down silently, and scores 1. Each sits down, on seeing it, giving no clue to the others.

The first to score 3 coons is winner, usually. Sometimes we play till every one but one has a coon; that one is the booby. The others are first, second, etc.

Sometimes each is given his number in order of finding it. Then, after 7 or 8 coons, these numbers are added up, and the *lowest* is winner.

### Rat on the Lodge

Each player has a good-sized bean bag. This is the rat and is kept by the player permanently.

The lodge is any solid object six inches or more above the ground or floor. A dead-line is drawn through the lodge and another parallel, 15 feet away, for a firing-line.

The boy who is "it," or "keeper," perches his bean bag or rat on the lodge. The others stand at the firing-line and throw their bean bags at his. They must not pick them up or touch them with their hands when they are beyond the dead-line. If

one does, then the keeper can tag him (unless he reaches the firing-line) and send him to do duty as keeper at the rock.

But they can coax their rats with their feet up to the dead-line, not beyond, then watch for a chance to dodge back to the firing-line, where they are safe at all times.

If the rat is knocked off by any one in fair firing, the keeper is powerless till he has replaced it. Meantime, most of the players have secured their rats and got back safe to the firing-line.

## Water-boiling Contest

Given a hatchet and knife, 1 match, a 2-quart pail, 7 inches or less in diameter, one quart of water and a block of soft wood about 2 feet long and 5 or 6 inches through.

The record for water-boiling is said to be 7.59.

First cut plenty of wood. Spend three minutes on it. Support your pail on four pegs driven in the ground or by a long stick driven diagonally into the ground. If water is handy dip the pegs in it before placing.

The water must be jumping and bubbling *all over the surface* or it is not boiling.

If the first match goes out, contestants are usually allowed a second, but are penalized by having 2 minutes added to their time.

## Medley Scouting

The following competition in Medley Scouting took place at one of my camps. A prize was offered for the highest points in the following:

At the word, "Go."

Bring a leaf of sugar-maple; and tell how it differs from other maples.

Tell a short story or give a recitation.

Bring a leaf of poison ivy (wrapped in a thick paper, to avoid touching it), and describe the poison, and mode of counteracting it.

Mark off on a stick your idea of a yard.

Bring a leaf of witch hazel, and tell what it is good for.

Bring a leaf of beech, and tell how it differs from those most like it.

Dance a step; any—English, Irish, Scotch, or Indian.

Strike a match and light a lamp; both of them imaginary.

Make a map of North America from memory in ten minutes.  
Give an imitation of some animal, actions or sounds.

Play the part of an Indian woman finding her warrior dead.

For each of the first 20 competitors, points were given; the prize adjudged by the total.

Some of these stunts may seem trivial, but there was a purpose in each, and that purpose was served. In the Indian widow, for example, we wished to select the best actor for play. Most of the boys failed. Two were good, but one, nearly the smallest in camp, was so fine that he brought tears into the eyes of many.

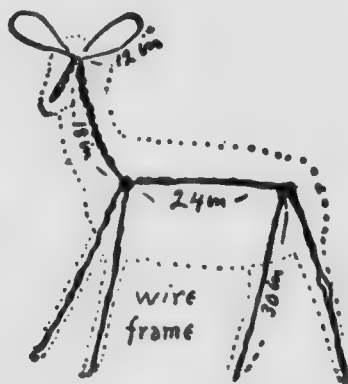
The selection of the various leaves impressed these kinds on all, especially those who failed to bring the right ones.

The animal imitation and dance was introduced to cultivate the spirit of going fearlessly in and doing one's best, however poor it might be. The imitations of monkey, lynx, cat, panther, moose, etc., developed a keen observation and a lot of good natural history that was intensely interesting as well as amusing.

The water-boiling was particularly instructive and was tried twice. The first time the winner took 14 minutes, and the second best 20. The last time, the winner's time was 8 minutes, and the second one's 10.

### Still-hunting the Buck, or the Deer Hunt

The deer is a dummy, best made with a wire frame, on which soft hay is wrapped till it is of proper size and shape, then all is



covered with open burlap. A few touches of white and black make it very realistic.

If time does not admit of a well-finished deer, one can be



made of a sack stuffed with hay, decorated at one end with a smaller sack for head and neck, and set on four thin sticks.

The side of the deer is marked with a large oval, and over the heart is a smaller one.

Bows and arrows only are used to shoot this deer.

A pocketful of corn, peas, or other large grain is now needed for scent. The boy who is the deer for the first hunt takes the dummy under his arm and runs off, getting ten minutes' start, or until he comes back and shouts "ready!" He leaves a trail of corn, dropping two or three grains for every yard and making the trail as crooked as he likes, playing such tricks as a deer would do to baffle his pursuers. Then he hides the deer in any place he fancies, but not among rocks or on the top of a ridge, because in one case many arrows would be broken, and in the other, lost.

The hunters now hunt for this deer just as for a real deer, either following the trail or watching the woods ahead; the best hunters combine the two. If at any time the trail is quite lost the one in charge shouts "Lost Trail!" After that the one who finds the trail scores *ten*.

Any one giving a false alarm by shouting "deer" is fined *five*. Thus they go till some one finds the deer and shouts "Deer!" and scores *ten* for finding it. The hunters then shout "Second," "Third," etc., in order of seeing it, but they do not score.

The finder must shoot at the deer with his bow and arrow from the very spot whence he saw it. If he misses, the second hunter may step up five paces, and have his shot. If he misses, the third one goes five, and so on till some one hits the deer, or until the ten-yard limit is reached. If the finder is within ten yards on sighting the deer, and misses his shot, the other hunters go back to the ten-yard limit. Once the deer is hit, all the shooting must be from the exact spot whence the successful shot was fired.

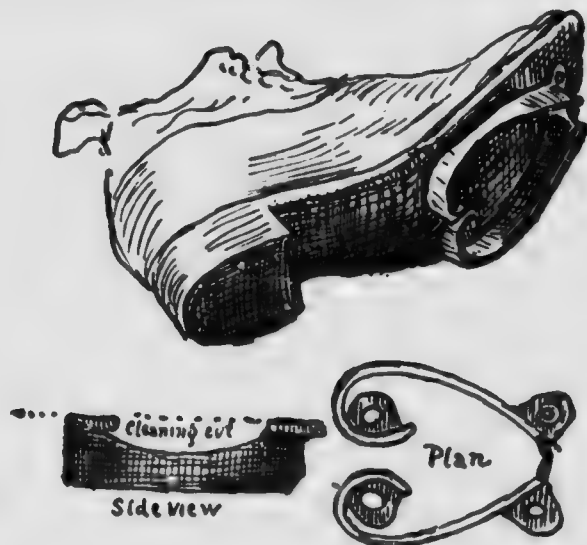
A shot in the big oval is a *body wound*; that scores *five*. A shot outside that is a *scratch*; that scores *two*. A shot in the small oval or heart is a *heart wound*; it scores *ten*, and ends the hunt. Arrows which do not stick do not count, unless it can be proved that they passed right through, in which case they take the highest score that they pierced.



If all the arrows are used, and none in the heart, the deer escapes, and the boy who was deer scores *twenty-five*.

The one who found the dummy is deer for the next hunt. A clever deer can add greatly to the excitement of the game.

Originally we used paper for scent, but found it bad. It littered the woods, yesterday's trail was confused with that of to-



day, etc. Corn proved better, because the birds and the squirrels kept it cleaned up from day to day, and thus the ground was always ready for a fresh start. But the best of all is the hoof mark for the shoe. These iron hoof marks are fast to a pair of shoes, and leave a trail much like a real deer. This has several advantages. It gives the hunter a chance to tell where the trail doubled, and which way the deer was going. It is more realistic, and a boy who can follow this skilfully can follow a living deer. In actual practice it is found well to use a little corn with this on the hard places, a plan quite consistent with realism, as every hunter will recall.

It is strictly forbidden to any hunter to stand in front of the firing-line; all must be back of the line on which the shooter stands.

There is no limit to the situations and curious combinations in this hunt. The deer may be left standing or lying. There is no law why it should not be hidden behind a solid tree trunk. The game develops as one follows it. After it has been played for some time with the iron hoof mark as above, the boys grow so

skilful on the trail that we can dispense with even the corn. The iron mark like a deer hoof leaves a very realistic "slot" or track, which the more skilful boys readily follow through the woods. A hunt is usually for three, five, or more deer, according to agreement, and the result is reckoned by points on the whole chase.

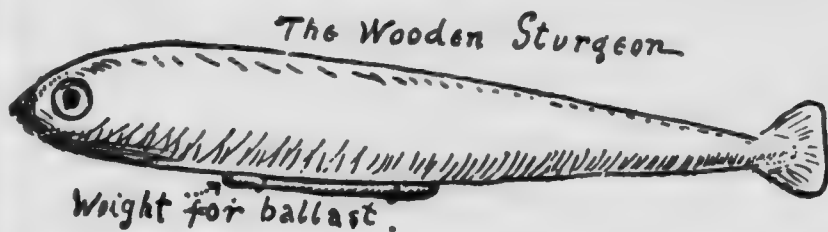
## WATER GAMES

### Spearing the Great Sturgeon

This water game is exceedingly popular and is especially good for public exhibition, being spectacular and full of amusement and excitement.

The outfit needed is:

- (1) A sturgeon roughly formed of soft wood; it should be



about three feet long and nearly a foot thick at the head. It may be made realistic, or a small log pointed at both ends will serve.

- (2) Two spears with six-inch steel heads and wooden handles (about three feet long). The points should be sharp, but not the barbs. Sometimes the barbs are omitted altogether. Each head should have an eye to which is attached twenty feet of



one-quarter-inch rope. On each rope, six feet from the spearhead, is a fathom mark made by tying on a rag or cord.

- (3) Two boats with crews. Each crew consists of a spearman, who is captain, and one or two oarsmen or paddlers, of which the after one is the pilot. All should be expert swimmers or else wear life belts during the game.

*The game.* Each boat has a base or harbor; this is usually part of the shore opposite that of the enemy; or it obviates all danger of collision if the boat starts from the same side. The sturgeon is left by the referee's canoe at a point midway between the bases. At the word "Go!" each boat leaves its base and, making for the sturgeon, tries to spear it, then drag it by the line to the base. When both get their spears into it the contest becomes a tug of war until one of the spears pulls out.

The sturgeon is landed when the prow of the boat that has it in tow touches its proper base, even though the spear of the enemy is then in the fish: or it is landed when the fish itself touches base if it is also in tow at the time. The boats change bases after each heat.

Matches are usually for one, three, or five sturgeon. Points are counted only for the landing of the fish, but the referee may give the decision on a foul or a succession of fouls, or the delinquent may be set back one or more boat-lengths.

Sometimes the game is played in canoes or boats, with one player as spearman and crew.

*Rules:* It is *not allowed* to push the sturgeon into a new position with the spear or paddle before striking.

It is *allowed* to pull the sturgeon under the boat or pass it around by using the line after spearing.

It is *allowed* to lay hands on the other boat to prevent a collision, but otherwise it is forbidden to touch the other boat or crew or paddle or spear or line, or to lay hands on the fish or to touch it with the paddle or oar, or touch your own spear while it is in the fish, or to tie the line around the fish except so far as this may be accidentally done in spearing.

It is *allowed* to dislodge the enemy's spear by throwing your own over it. The purpose of the barbs is to assist in this.

It is *allowed* to run on to the sturgeon with the boat.

It is *absolutely forbidden* to throw the spear over the other boat or over the heads of your crew.

In towing the sturgeon the fathom-mark must be over the gunwale—at least six feet of line should be out when the fish is in tow. It is not a foul to have less, but the spearman must at once let it out if the umpire or the other crew cries "Fathom!"

The spearman is allowed to drop the spear and use the paddle or oar at will, but not to resign his spear to another of the crew. The spearman must be in his boat when the spear is thrown.

If the boat is upset the judge's canoe helps them to right.

Each crew must accept the backset of its accidents.

### Canoe Tag

Any number of canoes or boats may engage in this. A rubber cushion, a hot-water bag full of air, any rubber football, or a cotton bag with a lot of corks in it is needed. The game is to tag the other canoe by throwing this *into* it.

The rules are as in ordinary cross-tag.

### Tilting in the Water

When used on the water, the ordinary rules of canoe tilting are followed. Each spearman stands in the bow of his boat, on the bow-seat. His crew bring him within eight feet of his rival, and now he endeavors to put him overboard. Points are reckoned thus:

Forcing your enemy to put one foot down off the seat	5
Forcing your enemy to put two feet down off the seat	10
Forcing your enemy on one knee	5
Forcing your enemy down on two knees	10
Forcing your enemy to lose his spear	10
Forcing your enemy overboard	25

It is a foul to strike below the knee, or to use the spear as a club.

The umpire may dock up to twenty-five points for fouls.

When canoes are used, the spearman stands on the bottom, so all points are by loss of spear, or by going overboard.

## INDOOR GAMES

### Odds and Evens

Boys form in a single line across the room. One boy is "it." He says he will call odds; then calls numbers both odd and even, but those in the line must run only on odd numbers. If any run on even they are out, also those are out who, when the line runs on an odd number, are the last to reach the given goal.

### Blind Man's Buff

All players are numbered, one player is blindfolded. The others form a ring about him. The one in the centre calls out

two numbers, the players having these numbers change places at once, the one in the centre trying to catch one of them. If successful he takes the place and number of the boy caught and that player goes in the centre and is in turn blindfolded.

### My Vacation

Make booklets with the pages entitled "My earliest photograph," "My latest picture," "Who went with me," "How we went," "Where we went," "Where we lived," "Some people we met," "An accident," "How it turned out," "Our happiest moments," "A near tragedy," "Finis," etc. Give each boy an old magazine, a pair of scissors and paste and he is to cut illustrations for the pages of his booklet from the magazine and can make some very amusing combinations, adding poetry if he is clever.

### Names by Topics

- "What names suggest birds?" Drake, Partridge, Hawk, etc.
- "What names are part of a house?" Beam, Garrett, Locke, Key, Hall, etc.
- "What names are part of the body?" Hand, Foote, Hart, etc.
- "What names are flowers, shrubs, or grains?" Lily, Rose, Cotton, Marguerite, Rice, Berry, etc.
- "What names suggest occupations?" Miller, Goldsmith, Butler, Shepherd, Cook, etc.
- "What names suggest geographical formations?" Dale, Beach, Hill, Brooks, Stone, etc.

### Fortune

Requiring two sets of numbered cards, the players are given these cards of one set only until all are distributed. The other set of cards, corresponding in number to those given out, are played face down on the central table (or floor if desired). Each player in turn goes to this set, places his hand upon the topmost cards and says, "The boy who has the card corresponding to this is red headed and quick tempered. He will either be a great politician or have a coal wagon" (or something else humorous, or impossible). He then turns the card over, holds it up, and finds the owner of the corresponding card. Much fun may be had if the description given was exactly opposite of the truth. The game continues by having the owner of the last card tell ~~some~~ one's character or fortune.

### Guessing Game

The players sit in a circle; one of them is blindfolded and stands in the centre. Each player is given a number. Then the blindfolded player calls 3 or 4 numbers as 1, 5, 9, 10. The players who have those numbers jump up and change seats among themselves. While this changing goes on the blindfolded player attempts to catch them. If he does succeed in catching one he must guess who the captive is (by feeling his dress, features, etc.). If he guesses correctly his eyes are uncovered and the captive is "it." If not, the game is continued as before—several more members being called out.

### Kingdom

The Guesser goes out of hearing until the group chooses an object. Then the Guesser is called and may ask any question that can be answered by "Yes" or "No," only one question of one person, and the number of questions is limited, perhaps ten or fifteen, according to the cleverness of the Guesser and the abstruseness of the object chosen. The Guesser usually begins by asking, "What kingdom is it?" and having established whether the object is in animal, vegetable, or mineral kingdom, proceeds to ask such questions as will narrow the subject down as quickly as possible to object selected.

### Geography

Any number of players allowed for this game, which has often been played at a dinner table or around a campfire. The first player begins by naming a geographical place, such as a mountain, river, city, state, or nation; the next player gives another name, which must be geographical and the first letter of which must be the same as the last letter of the name given by the first player; and so on around the circle, again and again, until all have dropped out by failing to think of a suitable name and the one remaining is the winner. For instance, first player names *Alabama*; second player names *Arkansas*, third player names *Saskatchewan*, fourth player, the *Nile*.

### Game of Menagerie

The players are seated in a circle. One begins thus, "As I went to the Menagerie—" His neighbor to the right asks,

"What did you see there?" He answers, "I saw a lion." The neighbor then turns to his right-hand neighbor and says, "I went to the Menagerie." The same question is then asked, "What did you see there?" The second player must then repeat the answer of the first, "I saw a lion," adding to it an animal of his own, "and a monkey." The game goes on in this way, each player putting the same question and answer of his neighbor and adding the name of another animal. "Pack the Trunk" may be played in a similar manner. Any article suitable or grotesque may be packed in the trunk.

### Menagerie Party

Each player receives on a slip of paper a number and the name of an animal. e. g., 1, elephant, 2, mouse. The leader calls on each player in turn to come forward and draw on a blackboard the animal named on his slip. One minute is given to execute each drawing. The other players try to guess the animal on the board and write their guess, correctly numbered, on papers provided for the purpose. When the list has been completed the leader reads the correct list aloud and the players correct their mistakes. If there are not many artists present, the results are apt to be startling.

### A Portrait Party

A modification of the last game is for the players to sit in a circle and each draw a portrait of his left-hand neighbor. The leader collects the portraits, puts a number on each to identify it, and places them on exhibition. The players try to guess the original of each portrait.

### Magic Music

The player who is "it" leaves the room, while the others decide upon some action they want him to do, for instance—walk to the centre of the room and recite poetry. The player then returns and the game commences. The other players sing or hum or one plays the piano. When the player who is "it" nears his destination (in this case the centre of the room) the music grows louder and he can tell that he is on the right track. If he hesitates or goes in the wrong direction the music continues soft and low. Having at last reached the proper spot, the player proceeds to try out all sorts of stunts, until, guided by the tone of the music, he hits upon the right action (reciting



poetry). The game goes on in this way, another player being chosen each time.

### Fireside Trick\*

Put your hands together as in the drawing, palms also touching.

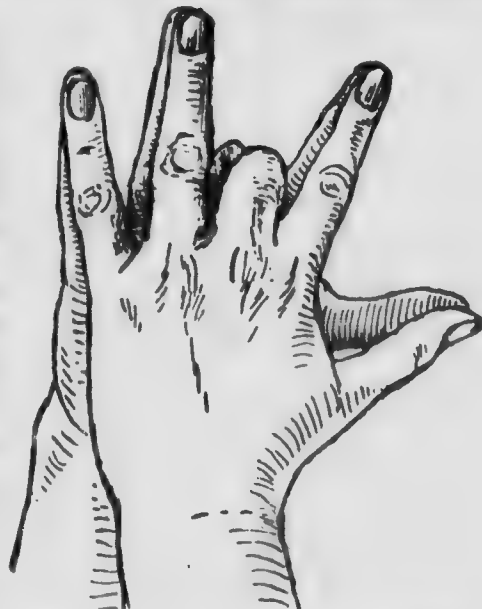
The thumbs are you and your brother. You can separate easily—like that.

The first fingers are you and your father, you can separate not quite so easily—like that.

The little fingers are you and your sister, you can separate, but that comes a little harder still—like that.

The middle fingers are you and your mother, you can separate, but it is hard—see that.

The ring fingers are you and your sweetheart, you cannot separate without everything else going first to pieces.

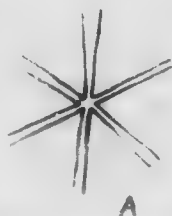


### The Lone Star Trick\*

A Texan showed me an interesting trick on the table. He took six wooden toothpicks, bent then sharply in the middle, and laid them down in the form shown in "A."

"Now," he says, "when our people got possession of Texas, it was nothing but a wilderness of cactus spines. See them there! Then they began irrigating. (Here he put a spoonful of water in the centre of the spines.) And then a change set in and kept on until they turned into the Lone Star State."

As we watched, the water caused the toothpicks to straighten out until they made the pattern of a star as in "B."



A



B

\* From "Book of Woodcraft."

## Woodcraft Manual for Boys

### Feather Football or Feather Blow

This is an indoor, wet-weather game.

The players hold a blanket on the knees or on the table. A soft feather is put in the middle. As many may play as can get near. They may be in sides, 2 or 4, or each for himself. At the signal "Go!" each tries to blow the feather off the blanket at the enemy's side, and so count one for himself.

A game is usually best out of 7, 11, or 13.

#### Books Recommended

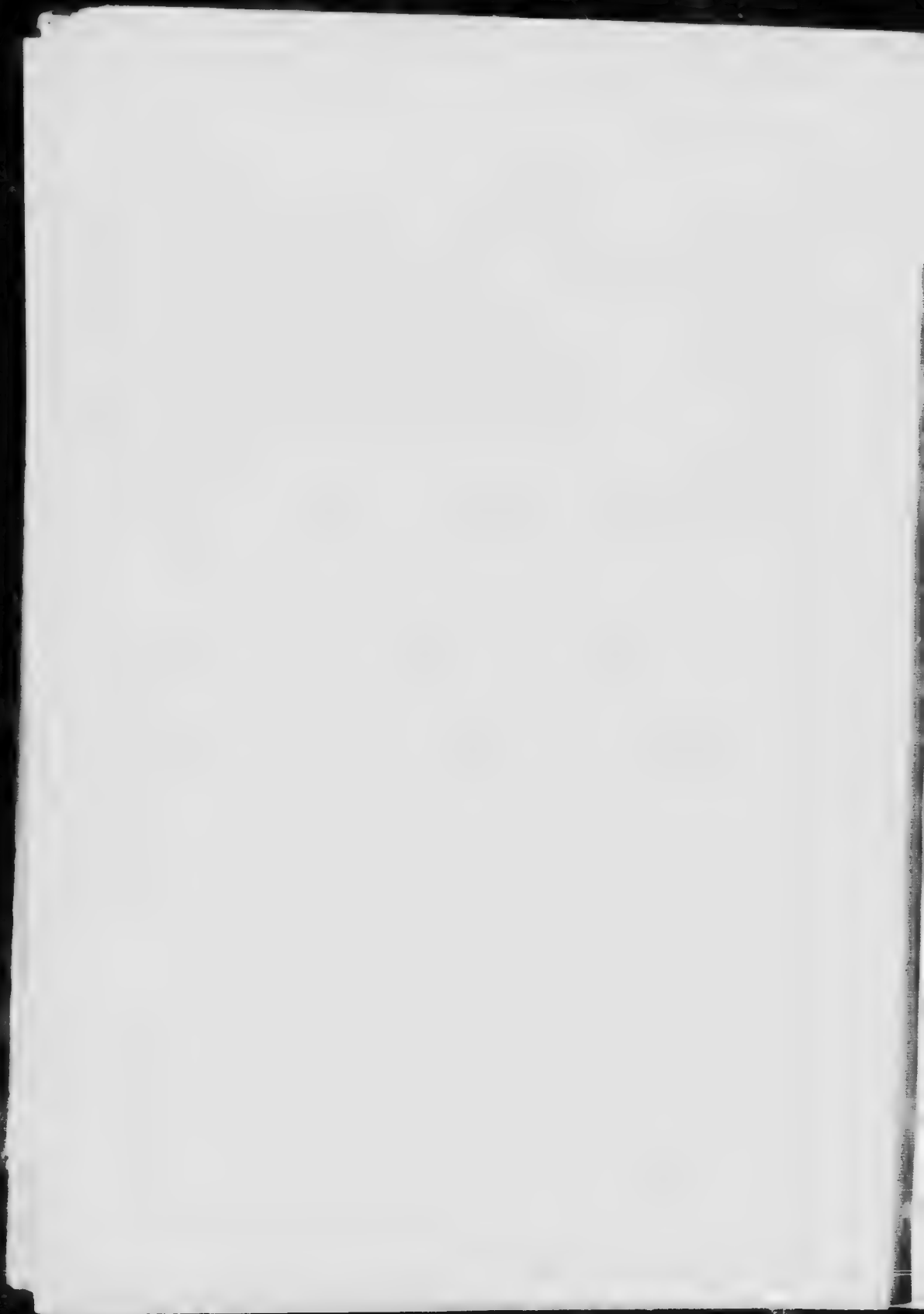
GAMES FOR THE PLAYGROUND, HOME, SCHOOL AND GYMNASIUM. Jessie H. Bancroft, Published by the MacMillan Company, 450 pages. \$1.50  
CAMP AND OUTING ACTIVITIES. (Cheley-Baker.) Published by Association Press. \$1.50

table.  
as can  
himself.  
ff the

Jessie  
r.50  
ssocia-

## SONGS

America	Hike Song
Star-Spangled Banner	Good Night
O Beautiful for Spacious Skies	Canoeist's Love Song
Rouser	Death Song
Alouette	Zon-zi-mon-de
Omaha Tribal Prayer	Muje Mukesin
	Hither Thunder



## SONGS

### Group Singing

There may be Woodcrafters who are little interested in athletics and not moved by the charms of handicraft, but it is very doubtful whether there are any indifferent to music. All cannot produce it, but all can enjoy it in some measure.

There can be no finer expression of team play than in group singing, and no Woodcraft Tribe will have done its best work until its members have learned to sing well, and while it is desirable that the leader be a musician, any one who can carry a tune can select good singable songs and teach them to the group.

In addition to the general songs, which may be found in all of the good collections of songs, are the songs that are particularly native to America. These are considered by many of our best composers to be of high value. Because of the fact that these native American folk-songs have not been greatly used we are including several of them in this chapter.

It is the spirit of the American folk-song that commends it. It is spontaneous, interpreting the world about us as well as the world within, offering a song and a dance for every mood and every large event in life.

### America

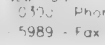
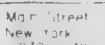
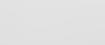
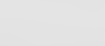
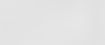
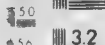
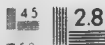
My country, 'tis of thee,  
Sweet land of liberty,  
Of thee I sing:  
Land where my fathers died,  
Land of the Pilgrim's pride,  
From every mountain side  
Let freedom ring.

My native country, thee,  
Land of the noble free,  
Thy name I love:  
I love thy rocks and rills,  
Thy woods and templed hills;  
My heart with rapture thrills  
Like that above.



# MICROCOPY RESOLUTION TEST CHART

(ANSI and ISO TEST CHART No. 2)



APPLIED IMAGE Inc

1653 East Main Street  
Rochester, New York 14619  
(716) 482-0300 Phone  
(716) 288-5989 Fax

## Woodcraft Manual for Boys

Let music swell the breeze  
 And ring from all the trees  
 Sweet freedom's song;  
 Let Mortal tongues awake,  
 Let all that breathe partake  
 Let rocks their silence break,  
 The sound prolong.

Our father's God, to Thee,  
 Author of liberty,  
 To thee we sing;  
 Long may our land be bright  
 With freedom's holy light;  
 Protect us by Thy might.  
 Great God, our King.

—*Samuel F. Smith, 1832.*

## The Star-Spangled Banner

O say, can you see, by the dawn's early light,  
 What so proudly we hail'd at the twilight's last gleaming?  
 Whose broad stripes and bright stars, thro' the perilous fight?  
 O'er the ramparts we watched were so gallantly streaming;  
 And the rocket's red glare, the bombs bursting in air,  
 Gave proof thro' the night that our flag was still there?  
 O say, does that star-spangled banner yet wave  
 O'er the land of the free and the home of the brave?

On the shore, dimly seen thro' the mists of the deep,  
 Where the foe's haughty host in dread silence reposes,  
 What is that which the breeze, o'er the towering steep,  
 As it fitfully blows, half conceals, half discloses?  
 Now it catches the gleam of the morning's first beam,  
 In full glory reflected, now shines on the stream—  
 'Tis the star-spangled banner. O long may it wave  
 O'er the land of the free and the home of the brave.

And where is that band who so vauntingly swore,  
 'Mid the havoc of war and the battle's confusion  
 A home and a country they'd leave us no more?  
 Their blood has washed out their foul footsteps' pollution,



No refuge could save the hireling and slave  
From the terror of flight, or the gloom of the grave—  
And the star-spangled banner in triumph shall wave  
O'er the land of the free and the home of the brave.

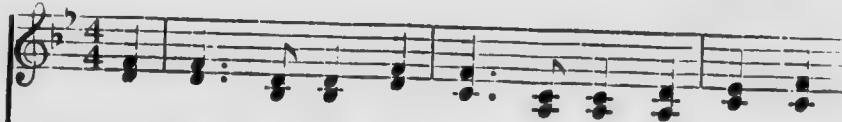
O thus be it ever when freemen shall stand  
Between their loved homes and foul war's desolation,  
Blest with vict'ry and peace, may the heav'n-rescued land  
Praise the Power that hath made and preserved us a nation.  
Then conquer we must, when our cause it is just,  
And this be our motto, "In God is our trust"—  
And the star-spangled banner in triumph shall wave  
While the land of the free is the home of the brave.

—Francis Scott Key, 1814.


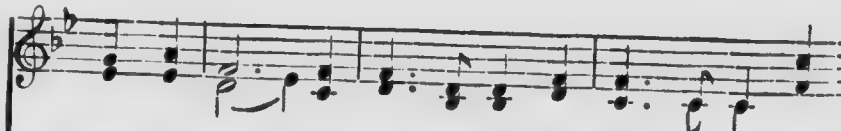
## O Beautiful for Spacious Skies

KATHERINE LEE BATES


S. A. WARD



1. O beau - ti - ful for spa - cious skies, For am - ber  
2. O beau - ti - ful for pil - grim feet Whose stern, im -  
3. O beau - ti - ful for he - roes proved In lib - er -  
4. O beau - ti - ful for pa - triot dream That sees be -

waves of grain, For pur - ple moun-tain maj - es - ties A -  
pas - sioned stress A thor - ough-fare for free - dom beat A -  
at - ing strife, Who more than self their coun - try loved, And  
yond the years Thine al - a - bas - ter cit - ies gleam Un -

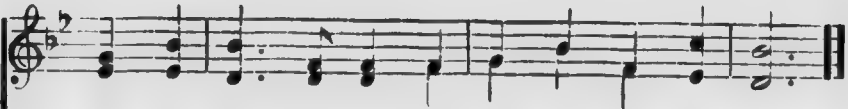


O Beautiful for Spacious Skies—*Concluded*

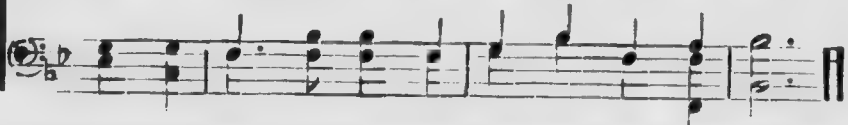

bove the fruit - ed plain! A - mer - i - ca! A -  
 cross the wil - der - ness! A - mer - i - ca! A -  
 mer - cy more than life! A - mer - i - ca! A -  
 dimmed by hu - man tears! A - mer - i - ca! A -




mer - i - ca! God shed His grace on thee And crown thy  
 mer - i - ca! God mend thine ev - 'ry flaw, Con - firm thy  
 mer - i - ca! May God thy gold re - fine, Till all suc -  
 mer - i - ca! God shed His grace on thee And crown thy

good with broth - er - hood From sea to shin - ing sea!  
 soul in self - con - trol, Thy lib - er - ty in law!  
 cess be no - t'e - ness, And ev - 'ry gain di - vine!  
 good with broth - er - hood From sea to shin - ing sea!

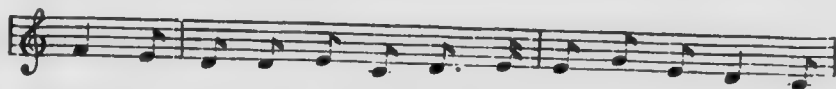


From "Fellowship Hymns." Used by permission of Association Press and Mrs. S. A. Ward.

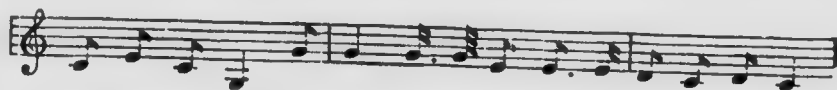
Rouser or Reveille



Ho, sleepers, a - rise! the sun's in the skies, The summer mist



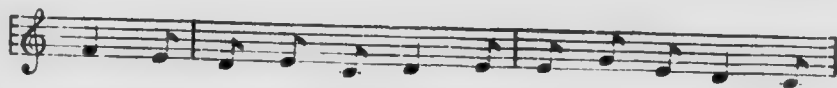
flies from the lake and the lea. The Red Gods do call: Ho,



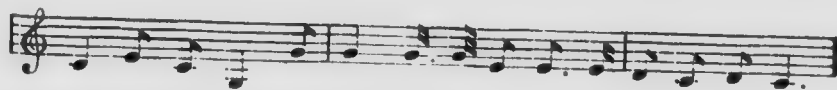
high, Hi-kers all, Come drink of the Life-cup you nev-er will see.



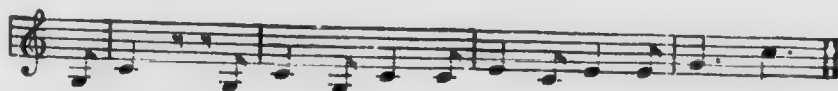
Then blow ye winds high, or blow ye winds low, Or blow, ye wet



east wind o - ver the sea. We'll face ye and fight, and



laugh when you smite, For storm was the trainer that toughened the tree.



Yo ho! a - rise, a - rise! A - rise, a - rise, yo ho - ol

## Alouette

Old French-Canadian Song.

*of Moderate*

1. A-lou et ta, geu-tille A-lou et ta. A-lou-et-ta, jo to plu-me-  
 rel, jo to plu-me-rel in tite, jo to plu-me-rel in tite, et la  
 tite, et la tite, et la tite. O . . . . . A-lou-  
 Cacosa. Cacosa. Cacosa.  
 et la tite, et la tite. O . . . . . A-lou-  
 Cacosa. Cacosa. Cacosa.

et ta, geu-tille A-lou-et ta, A-lou-et ta, jo to plu-me-rel.  
 et ta, geu-tille A-lou-et ta, A-lou-et ta, jo to plu-me-rel.

From "Social Activities," by Chesley, pub. by Association Press.

Alouette is an unusually fine song for group singing. The idea is that of caressing a beautiful bird. A leader sings the verse up to end of "je te plumerai la tete" and the group repeats this, running down scale. The soloist sings "et la tete" and the chorus repeats twice. All sing chorus. In the next verse the soloist uses "cou" and just before the chorus, adds to it the word used in the previous verse as: "et le cou" response by crowd, then "et la tete" response from crowd, then on to chorus. After each verse the previous verse words are added until all the parts of the bird have been used.

## The Omaha Tribal Prayer

Harmonized by PROF. J. C. FILLMORE.

*Slow. Grave. Solemn.*  
*mp*

Wa-kon-da dhe - dhu Wa-pa dhin a - ton - he.

*Con Ped.* \*

Wa-kon-da dhe - dhu Wa-pa-dhin a - ton - he.

*Ped.* \*

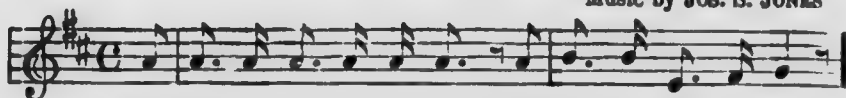
By permission from Alice C. Fletcher's "Indian Story and Song."

Translation:

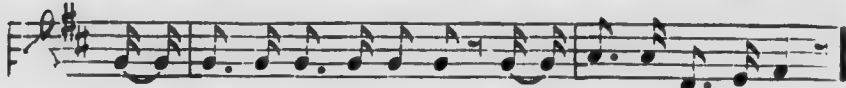
Father a needy one stands before thee;  
I that sing am he.

## Hike Song

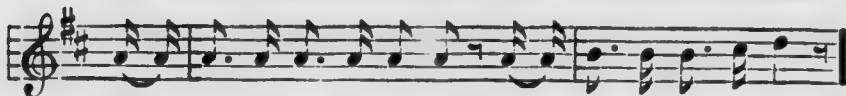
Music by JOE. S. JONES



1. Way down in yon-der val-ley The mist is like a sea,
2. We wan-der by the wood-land That hangs up-on the hill,
3. We gaze up-on the streamlet, As o'er the bridge we lean;



Tho' the sun be scarce-ly ris-en, There is light e-nough for me.  
 We hear the birds a-tun-ing, Their morn-ing clar-ion shrill.  
 We watch its hur-ried rip-ples, That catch the morn-ing sheen.



For 't ear-ly morn-ing, Or be it late at night;  
 For hur-ried-ly a-wak-ing, From midst the dew-y spray;  
 Oh, the Woodcraft Boys are stalwart, And the Woodcraft Girls are fair;



Cheer-i-ly ring our foot-steps, Right, left, right!  
 Cheer-i-ly now the black-bird, Whist-ling greets the day.  
 And cheer-i-ly breathes around us, The bracing wood-land air.

## CHORUS



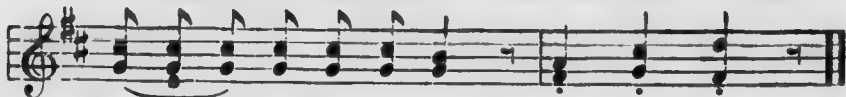
For be it ear-ly morn-ing, Or be it late at night,



Cheer-i-ly ring our foot-steps, Right, left, right. Mid



eve-nings dusk-y shad-ows, In morn-ing ros-y light,



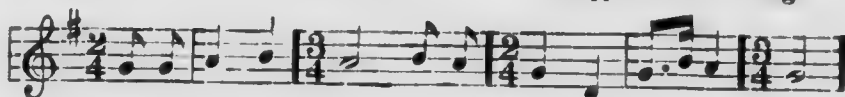
Cheer-i-ly ring our foot-steps, Right, left, right.

From "University of Toronto Song Book." F. Suckling & Sons, Toronto.

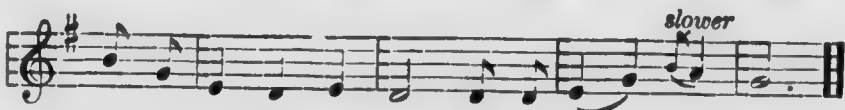
## Closing Lullaby

(Dedicated to E. T. S. by Frances Densmore.)

Chippewa Cradle Song



Bend-ing low to earth, We will now our si-lence keep;

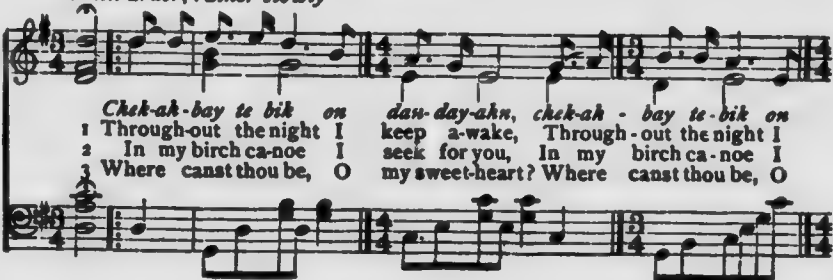


Win-ter killed all our mirth, And the Fire - flies sleep.

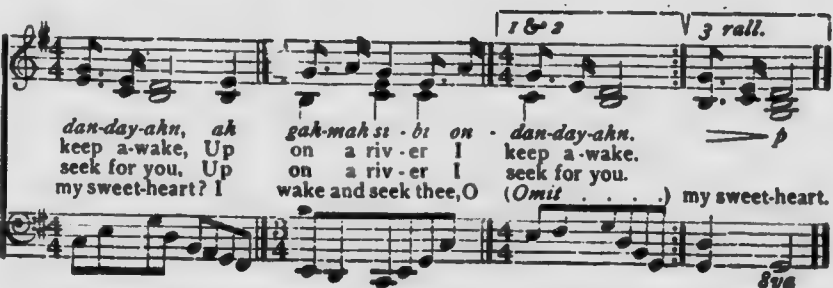
## The Canoeist's Love Song

OJIBWAY

*With ardor, rather slowly*



*Chek-ah-bay te bik on dan-day-ahn, chek-ah - bay te bik on*  
 1 Through-out the night I keep a-wake, Through-out the night I  
 2 In my birch ca-noe I seek for you, In my birch ca-noe I  
 3 Where canst thou be, O my sweet-heart? Where canst thou be, O



*dan-day-ahn, ah gah-mah st - bi on - dan-day-ahn.*  
 keep a-wake, Up on a riv-er I keep a-wake.  
 seek for you, Up on a riv-er I seek for you.  
 my sweet-heart? I wake and seek thee, O (Omit . . . ) my sweet-heart.

By permission from Frederick R. Burton's "American Primitive Music,"  
 with adaptation by Wm. Brewster Humphrey.

## Death Song

Ojibway

*Ver. moderate*

Mah-noo ne-nah nin-ga - mah-jah, mah-noo ne-nah,  
I am go-ing on a jour-ney Far and lone be -

nin-ga - mah - jah, A - o - da - na win - é nin-ga - de -  
yond the set-ting sun, To the Spir - it - land now I am de -

jah..... Mah - noo ne - nah nin-ga mah - jah - neen,  
part - ing, In the trail made by my fore - fa - thers,

A - o - da - na - vin - é nin-ga de... jah.....  
To the Spir - it - land e - ter - nal I am go - ing.

From "American Primitive Music," by Frederick R. Burton. Adapted by Wm. Brewster Humphrey of the American Indian League. Used by special permission.



# Tribe Activities

75

## Zon-zi-mon-de

(By permission from Alice C. Fletcher's "Indian Story and Song")

### Omaha

With special English words for use in welcoming an honored guest to the Woodcraft Council

Harmonized by Prof. J. C. FILLMORE

Spirited. M. M.  $\text{♩} = 152$

*mf*

Ye ha he ya e he dha ye ha he ya e he dha  
Ho ho ho ya ho he comes Shout a-loud ye Roll the drums

**DOUBLE DRUM BEAT**

*Con Ped.*

ah ha ya e he dha ye ha he ya e he dha  
Him that we now greet Give to him an hon-or -

dha ha dhoe. Zoñ-zi-mon-de a - ma sha e dhe. Ah ho  
ed seat (Use his name.) We hail thee chief Fame th.

*\* Con Ped.*

ya e he dha ye ha he ya e ha dha dha ha dho.  
name did bring Wel-come to our coun-cil ring.

*\**

## Muje Mukesin

*Rather fast*

Muj - je muk - e - sin aw - yaw - yon muj - je muk - e - sin aw - yaw - yon



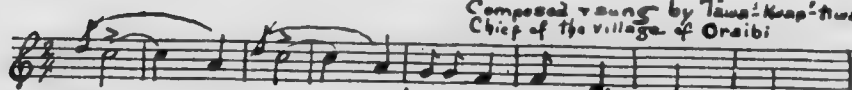
muj - je muk - e - sin aw - yaw - yon muj - je muk - e - sin aw yaw - yon.

This Moccasin Song, "Worn out Moccasins I am Wearing," is from Frederick R. Burton's "American Primitive Music," 1909, by permission.

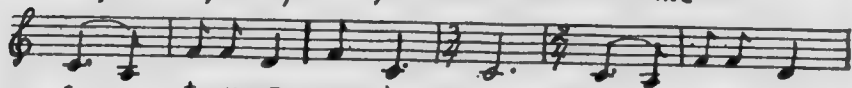
## Hither Thunder!

Hither Thunder! or Payyo!

Composed & sung by Tawa-Nwap-tawa  
Chief of the village of Oraibi



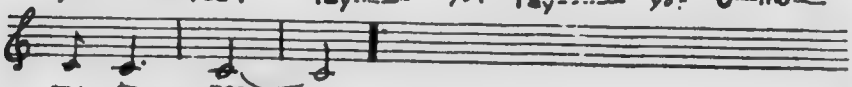
Pay..... yo! Pay.....yo! U-mu-u.. mu... ta - nee.....



Ea... ta-ya-a-ya...ta... nee. Ea... ta-ya-a-



-ya - ta - nee. Pay..... yo! Pay..... yo! U-mu-



mu - ta - nee.....

From "The Indians' Book," by Natalie Curtis; pub. Harper Bros., by special permission.

yaw - yon

w - yon.

red-

hwa



, by

# DANCING

## Dances

Storm Cloud  
Lone Hunter  
Dog Dance

Snake Dance  
Caribou Dance  
Animal Dance of Nana-bo-jou



## DANCING

John Ruskin surprised the world some fifty years ago by his eloquent plea for dancing as a mental training. Our educators have slowly accepted the idea and, some twenty years ago, began to seek in Europe for folk-dances that would furnish amusement combined with rhythmic exercise and the chance for dramatic expression.

Many good dances were brought from England, Russia, and Hungary, etc., before we awakened to the fact that in this department the richest of all lands to-day is our own country. There are more and better folk-dances in America than in any other country that we know of.

There are scores of charming Indian folk-dances which the Woodcraft Boy would like to know, a few of which are given here. They have been tried out many times and approved by leading educators. More than any others at present available, they contain the possibility of graceful movement, exercise, and dramatic expression.

It is unfortunate that the crouch of one certain dance has been accepted by many of the public as the only position in the Indian dances, for it has blinded us to the real beauties of their typical performances.

It is difficult for us to realize how much dancing meant to the Red Men. It figured in all their social and athletic life. The dance was a great public opportunity to either tell in pantomime historical facts or interpret ideas. The vital things of their everyday life, as well as their dramatic adventures, were presented at the Council Ring through the dance. The chase, the things connected with their religion; love and hate, peace and war, were all set forth to music and movement at the Council Fire.

The time most used for these dances is two-time; a heavy and light beat on the tom-tom, with or without the chant that especially belongs to each particular dance.

The fundamental step is the two-step, which consists of a very short step and a short hop on each foot, with a sharp upward action of the knee. This was meant originally to jingle a string of bells or rattles that were worn on each knee.

The one-time and three-time are less frequently used and are more difficult to do.

The arms and body are swayed and freely used to express the dramatic story; always, of course, rhythmically.

### The Storm Cloud

One of the best-known native dances is the Storm Cloud, the story of the Rising Wind and the Cloud done into a dance. The first time I saw it was at an Indian village on Lake Huron, when a tall, sturdy Indian did it with a buffalo robe. But it is used widely in the west, and the weight of the robe, which is the cloud, is proportional to the strength of the dancer.

It is danced by one boy using a white drape for the cloud. For a child this should be of cotton flannel or muslin about two yards long and a yard wide. For a stronger person a heavier drape, even a white blanket is sometimes used. This dance needs a large circle and should not be attempted in a small room.

It portrays the strong and rising wind playing with a cloud, beginning slowly but ending in a cyclone when the dancer spins and shrieking falls flat, while the cloud settles on his face.

The music is chiefly drum, sometimes only drum.

*Trailer* means the hands raised high and wide apart holding the cloud so that it floats behind.

*The Dip* consists in bending low to one side so that one hand points straight up, and one straight down, it is given first on one side then the other, the cloud floating behind.

*The Eagle Swoop* is given every six beats and it takes three beats to do it beginning with the hands raised in the trailer, lower the left hand to near the chest, raise the right straight up but forward, swing both down to left, then by swinging the right hand round the head and both hands into trailing position the cloud swings clear. After six more beats repeat at other side.

*The Flying Scud or Driving Cloud* thus, hold one end of the drape in left hand tight against the right shoulder, the other end in the right hand with arm fully extended and level the drape tight between the two hands, then running very fast once around wave the right hand up and down so that the cloud undulates.

*The Double Swoop* is much like the Eagle Swoop, but the dancer turns face to the right when the left hand swings over, then

turns and faces the left as the hands change so that the right is up.

*In the Spin* the cloud is held tight to the shoulder, as in Flying Scud once around is enough for each spin except the final.

*In the final*, three or four spins will do with grand crescendo, time, etc., then with a scream the dancer drops, jerks the cloud toward his feet, back over his head, then slightly back so it settles over his face and body.

While the drum is sufficient for the dance the effect is better if a low humming chant in correct time is kept up by the drummer. This should increase in volume, and in the climax all should give a high-pitched, prolonged shout while the drum beats a heavy tattoo.

Then all is still.

Sometimes when necessary to shorten it the 5th and 7th figures are left out, but it always begins with the Walking Trailer and ends with the Spin. The exact and full scenario is as follows:

(Each figure goes once around)

- 1st. Walking Trailer . . . . . brisk march time
- 2nd. " " with side dip. . . . . " " "
- 3rd. Running Trailer . . . . . double quick "
- 4th. " " with side dip. . . . . " " "
- 5th. Eagle Swoop, 6 beats to the trailer pause and 3 beats to the dip.
- 6th. Flying Scud.
- 7th. Trailer and Double Eagle Swoop, 6 beats trailer and 3 beats for each swoop.
- 8th. Flying Scud, with a spin for each of the four Winds.
- 9th. Double Eagle Swoop without trailer.
- 10th. Spin in centre, wind screams as the dancer drops flat then dies.

Dead Calm.

## The Lone Hunter

The Lone Hunter is a favorite for a single dancer. The dancer should be in white for the best effect and carry a light fifteen-inch wooden shield on the left arm and a light six-foot spear of wood in the left hand. The making of these is sufficiently shown in the cut.

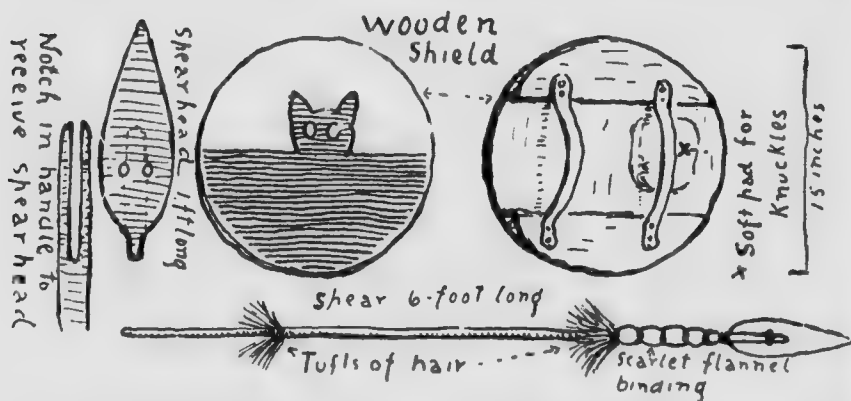
It tells the story of a scout who went forth alone to hunt, but carrying the shield as he may venture into the hunting grounds of another tribe.

First the drum gives a long roll to notify the audience the scout is coming in, then three thumps for the scout to appear.

He steps into the Ring, holding the spear high in one hand, and the shield in the other. He gives a loud shout then changes the spear to the left hand with the shield (he pats his mouth with the flat right hand to make the rolling call); then dances to the two-time (Zon-zi-mon-de or Muje Mukesin will do to accompany the drum) around the ring twice, showing off, as this is supposed to be in the village, swinging the spear and buckler high in the air or clashing them together; making playful passes at the spectators, tossing back his long hair or feathers streaming behind—doing all in graceful gesture to the music. This is the show off in the village.

Next the dancer goes on the real hunt. Crouching somewhat now, shading his eyes with his hand on the shield, listening for every sound, peering here and there, and sometimes sticking the spear into things to pick them up for examination. Thus he goes once around to two-time music.

Now, at the beginning of the fourth round, he stops and starts, he has found a trail and by his action must show that he has. The music now changes to slow march time. The



two-step dance is ended. The dancer follows an imaginary track all around, picking up leaves and trying the wind or looking for helpful signs. When at length back to the starting point, the next act begins.

Suddenly he descries a deer quietly feeding, unconscious of enemies, and is all tense excitement. Now he crawls up, keeping step to the march time, putting in all possible expressions to tell the story, until nearly within throwing distance, he rises, makes a "stodger" or feint with the spear, then another,



and at the third or last (rising higher each time) finally is just about to let go when a noise out to one side suddenly attracts his attention. He turns quickly to realize that close at hand is a band of his tribal enemies and that he is in a trap. His expression of triumph changes to fear. He shrinks to the ground and swiftly runs away till at the exit there he turns, and, flinging back a defiant yell, shakes his spear at the foes and is lost to view.

A long drum roll closes the scene.

### The Dog Dance

This is a Shoshoni celebration. A procession is formed. The leader carries a bucket, a stool, or a basket upside down, for a low stand. The next one carries a dog's skull, or something like one. We have used a loaf of bread, provided with eyes and teeth, or a big puff ball. The next has a dish or a flat Indian basket or tray. The next two or three have feathers, and the rest have crackers or candies. The last is fixed up with a dog's mask and tail, and runs on all-fours.

The procession comes in dancing and barking to a two-time dance tune—goes once around.

Then the leader puts down the stand. The skull is set on it, and the tray on the ground before. The rest sit in a half-circle in front.

The leader then kneels down and addresses the skull thus: "Dog! In the days of our fathers you were the one who dragged the lodge poles from camp to camp. Without you, we could have had no comfortable place in which to sleep. So I will dance and sing in your honor to-night."

He puts a feather in the dog's head, then dances his best dance, while the rest sing, "Yap-yap, Yap-yap, Yap-yap, Yow-w-w-o" in imitation of a dog barking on a rising scale, finishing with a long howl.

The leader has now danced to the r end of the half-circle and sits down.

The next comes and addresses the skull: "Dog! In times of war you were the one who guarded the camp at night. No one could surprise us when you were on watch. Nothing could make you betray us. So I will dance and sing in your honor to-night!"

He adds a feather and dances his best, while the rest "Yap" the dog chorus. Then he sits at the opposite end of the circle.

The next comes and says, perhaps, "Dog! In the days

of our fathers you were the one who could follow the wounded deer. You made the hunting a success. So I will dance and sing in your honor to-night."

He adds a feather o a candy, and dances. (Yap, yap, as before.)

The next says: "Dog! When I was a little pappoose, I wandered from the village and fell in the river. No one saw me. I should have been drowned, but you jumped in and pulled me out. So I will dance and sing in your honor to-night."

He adds his contribution and dances.

The next says: "Dog! You were the one who cleaned up the camp, so we were not troubled with flies."

Others thank the dog for finding the lost children, for giving alarm when an enemy approached, for killing a rattler, for finding the lost medicine bag, etc.

Then the last one, the boy dog, comes up and barks at the head.

Finally, the leader resumes, saying: "Yes, Dog! You were the one that dragged the lodge poles. You were the one that found the wounded deer, etc. And best of all, first, last, and all the time, you were our faithful friend, and all you asked in return was a bite to eat and a place to lie down. And so long as the blue sky is above the green grass you will be the friend of the prairie children. Then, when at last we cross over the great river, and see behind the Divide, we hope we shall find awaiting us our old friend, the Dog, that we may take up our friendship again, and continue on and on in the good country where no white man or smallpox ever comes."

Then they pass around the dish and eat the crackers and candies; offering things to the dog, and honoring him as much as possible with a variety of stage "business." Finally, all go off, carrying the various things and barking as they came.

### Ojibwa Snake Dance

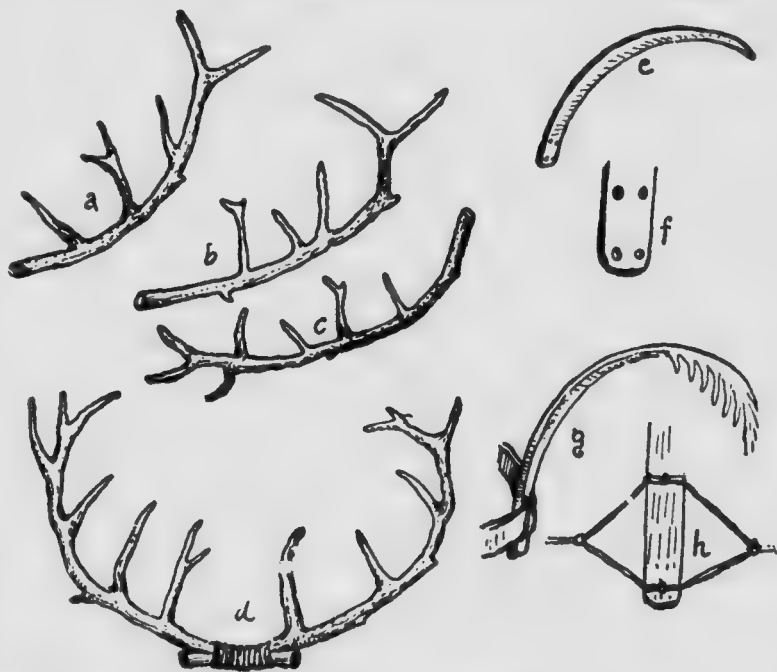
Select a good dancer for leader. All form line, holding hands, carefully graded so the smallest is last. Then, dancing in step to the music, they set out in a line, follow-my-leader style, doubling the line on itself, and evolving around the fire. Sometimes the dancers face alternately—that is, all the even numbers in the line look one way and the odd another.

A good finish is to curl in a tight spiral around the head, when the tail boy mounts on the back of the one before him and shakes a rattle, like a rattler rattling on its coil.

## The Caribou Dance

The easiest of our campfire dances to learn, and the best for quick presentation, is the Caribou Dance. It has been put on for public performance after twenty minutes' rehearsing, with those who never saw it before; and it does equally well for indoor gymnasium or for campfire in the woods.

In the way of fixings for this, you need four pairs of horns and four tails. Real deer horns may be used, but they are scarce and heavy. It is better to go out where you can get a few crooked limbs of oak, cedar, hickory, or apple tree; and cut eight pair, as near like *a, b, c*, in the cut as possible, each about two feet long and one inch thick at the butt. Peel



these; point the square ends of the branches, then lash them in pairs, thus (*d*). A pair, of course, is needed for each caribou. These are held in the hand and above the head, or in the hand resting on the head.

The tails are made each out of one third of a flat barrel hoop of wood. At one end of the hoop make four holes in pairs, an inch apart; thus (see *f* in cut). These are for cords that pass over the wearer's belt and through the hoop. The hoop is then wrapped with white muslin and finished with a

tuft of white muslin strips on the end. The tail finished looks like (g), and is stuck inside the wearer's belt, which goes through the two cord loops (h), shows a way of fastening on the tail with cord only.

The four caribou are best in white. Three or four hunters are needed. They should have bows but no arrows. The Medicine Man should have a drum and be able to sing the Muje Mukesin, as given, or other Indian dance tune. One or two persons who can howl like wolves should be sent off to one side, and another that can yell like a lynx or a panther on the other side, well away from the ring. Otherwise the Medicine Man or leader can do the imitations. Now we are ready for

#### THE DANCE OF THE WHITE CARIBOU

The Medicine Man begins by giving three thumps on his drum to call attention; then says in a loud, singing voice: "The Caribou have not come on our hunting grounds for three snows. We need meat. Thus only can we bring them back, by the big medicine of the Caribou Dance, by the power of the White Caribou."

He rolls his drum, then in turn faces each of the Winds, beckoning, remonstrating, and calling them by name: Kitchinodin (West); Keeway-din (North); Wabaninodin (East); Shawani-nodin (South). Calling last to the quarter whence the caribou are to come, finishing the call with a long *Ko—Kee—Va*. Then as he thumps a slow single beat the white caribou come in at a stately pace timed to the drum. Their heads are high, and they hold the horns on their heads, with one hand, as they proudly march around. After going round once in a sun circle (same way as the sun), they go each to a corner. The drum stops; all four approach to salute the great mystery in the middle, the fire. They bow to it together, heads low, tails high, uttering a long bellow.

Then they circle once, close to the fire; stop on opposite sides of it, facing outward; march each to a corner or compass point; and then bow or honor that *wind*, bellowing long.

Now the Medicine Man begins any good dance song and beats double time. The caribou dance around once in a circle. The music stops. The first and second, and third and fourth, close in combat. They lower their heads, lock horns held safely away from the head, lash tails, snort, kick up the dust, and dance around each other two or three times.

The music begins again, and they circle once.

The music stops. Now the first and fourth and second and third lock horns and fight.

After a round or so the music begins again and they circle, dancing as before.

Now the howling of wolves is heard in the distance, from the fellows already posted.

The caribou rush toward that side and face it in a row, threatening, with horns low, as they snort, stamp, and kick up the dust.

The wolf-howling ceases. The caribou are victorious. They turn away and circle once to the music, holding their heads high.

The wolf-howling, panther-yelling (or other menacing sound) is now heard in the other direction.

Again the caribou line up and defy it. When it ceases, they dance proudly around, heads up, chests out as they step, for they have conquered every foe.

But a band of hunters appears, crawling flat on their breasts and carrying bows. They crawl half around the ring, each telling those behind by signs, "Here they are; we have found them," "Four big fellows," "Come on," etc. When they come opposite the caribou, the first hunter lets off a short "yelp." The caribou spring to the opposite side of the ring, and then line up to defy this new noise; but do not understand it, so gaze in fear. The hunters draw their bows together, and make as though each let fly an arrow, then slap their hands to make a loud "crack." The first caribou drops, the others turn in fear and run around about half of the ring, heads low, and not dancing; then they dash for the timber. The hunters run forward with yells. The leader holds up the horns. All dance and yell around the fallen caribou and then drag it off the scene.

The Medicine Man says: "Behold, it never fails; the Caribou dance brings the Caribou. It is great medicine. Now there is meat in the lodge."

### The Animal Dance of Nana-bo-jou

For this we need a Nana-bo-jou; that is, a grown-up who can drum and sing. He has a drum and drumstick, and a straw or paper club; also two goblins, these are good-sized boys or girls wearing ugly masks, or at least black hoods with two eye holes, made as hideous as possible; and any number of children, from three or four up, for animals. If each has the attributes of some bird or beast, so much the better.

First, Nana-bo-jou is seen chasing the children around the outside of the circle, trying to catch one to eat; but failing, thinks he'll try a trick and he says, "Stop, stop, my brothers. Why should we quarrel? Come, let's hold a council together and I will teach you a new dance."

The animals whisper together and the coyote comes forward, barks, then says:

"Nana-bo-jou, I am the Coyote. The animals say that they will come to council if you will really make peace and play no tricks.

"Tricks!" says Nana-bo-jou "I only want to teach you the new songs from the South."

Then all the animals troop in and sit in a circle. Nana-bo-jou takes his drum and begins to sing,

"New songs from the South, my brothers,  
Dance to the new songs."

Turning to one, he says: "Who are you and what can you dance?"

The answer is, "I am the Beaver (or whatever it is) and I can dance the Beaver Dance."

"Good! Come and show me how."

So the Beaver dances to the music, slapping the back of his flat right hand, up and under his left hand for a tail, holding up a stick in both paws to gnaw it, and lumbering along in time to the music at the same time imitating the beaver's waddle.

Nana-bo-jou shouts: "Fine! That is the best Beaver Dance I ever saw. You are wonderful; all you need to be perfect is wings. Wouldn't you like to have wings so you could fly over the tree-tops like the eagle?"

"Yes," says the Beaver.

"I can make strong medicine and give you wings, if all the animals will help me," says Nana-bo-jou. "Will you?"

"Yes," they all cry.

"Then all close your eyes tight and cover them with your paws. Don't look until I tell you. Beaver, close your eyes and dance very fast and I will make magic to give you wings."

All close and cover their eyes. Nana-bo-jou sings very loudly and, rushing on the Beaver, hits him on the head with the straw club. The Beaver falls dead. The two goblins run in from one side and drag off the body.

Then Nana-bo-jou shouts: "Look, look, now. See how he

flies away! See, there goes the Beaver over the tree-tops." All look as he points and seem to see the Beaver going.

Different animals and birds are brought out to dance their dances and are killed as before. Then the Crow comes out, hopping, flopping, cawing. Nana-bo-jou looks at him and says: "You are too thin. You are no good. You don't need any more wings," and so sends him to sit down.

Then the Coyote comes out to do the Coyote Dance, imitating Coyote, etc.; but he is very suspicious and, in answer to the questions, says, "No; I don't want wings. The Great Spirit gave me good legs, so I am satisfied"; then goes back to his seat.

Next the Deer, the Sheep, etc., come out and are killed; while all the rest are persuaded that the victims flew away. But the Coyote and the Loon have their doubts. They danced in their turns, but said they didn't want any change. They are satisfied as the Great Spirit made them. They are very slow about hiding their eyes. At last, they peek and realize that it is all a trap and the Loon shouts: "Nana-bo-jou is killing us! It is all a trick! Fly for your lives!"

As they all run away, Nana-bo-jou pursues the Loon, hitting him behind with the club, which is the reason that the Loon has no tail and has been lame behind ever since.

The Loon shouts the Loon battle-cry, a high-pitched quavering *lul-l-l-l-o-o-o* and faces Nana-bo-jou; the animals rally around the Loon and the Coyote to attack the magician. All point their fingers at him shouting "Wakankan Seecha" (or Black Magic). He falls dead in the circle. They bury him with branches, leaves, or a blanket, and all the animals do their dances around him.

Before beginning the story of the dance should be told to the audience.

### Books Recommended

FOLK DANCES AND SINGING GAMES, by Elizabeth Burchenal. Published by G. Schirmer. \$1.50

INDIAN GAMES AND DANCES, by Alice Fletcher. Published by C. C. Birchard & Co., Boston. \$1.00

## PLAYS, PAGEANTS, AND MASQUES

### The Peace Pipe Ceremony

The Medicine Man, standing in front of the ready laid fire, opens Council thus: "*Neetgh Kola Nayhoonp Omnee-chee-yay*

*nee-chopi*— Hear me, my friends, we are about to hold a Council.

"Now light we the Council Fire after the manner of the Forest Children, not in the way of the white man, but—even as Wakonda himself doth light his fire—by the rubbing together of two trees in the storm wind, so cometh forth the sacred fire from the wood of the forest."

(He uses the drill; the smoke comes, the flame bursts forth.)

"Now know we that Wakonda, whose dwelling is above the Thunder-bird, whose messenger is the Thunder-bird, hath been pleased to smile on his children, hath sent down the sacred fire. By this we know he will be present at our Council, that his wisdom will be with us.

"This is a Council of Peace, so light we first the Pipe of Peace."

(Kneeling at the fire he lights the pipe. As soon as it is going, he lifts the pipe grasped in both hands, with the stem toward the sky, saying):

To *Wakonda*; that his wisdom be with us. *Hay-oon-kee-ya. Noon-way.*

(All answer): *Noon-way.* (Amen, or this is our prayer.)

To *Maka Ina*, Mother Earth, that she send us food, *Hay-oon-kee-ya. Noon-way.*

(All answer): *Noon-way.*

To *Weeyo-peata*, the Sunset Wind, that he come not in his strength upon us. (Then blows smoke and holds the stem to the west.)

To *Wazi-yata*, the Winter Wind, that he harm us not with his cold. (Pipe as before.)

To *Wee-yo-hinyan-pata*, the Sunrise Wind, that he trouble us not with his rain. (Pipe as before.)

To *Okaga*, the Hot Wind, that he strike us not with his fierce heat. (Pipe as before.)

Then the Medicine Man stands holding the pipe in one hand and proclaims aloud: "Now with the Blessing of Wakonda and respite from the *Tah-tee-yay To-pa*, we may deal with business of gravest import, doubting nothing, for wisdom from above is with us."

### Books Recommended

The following books will be found of great value in the putting on of Plays, Pageants, and Masques:

PLAYS OF THE PIONEERS, Constance D'Arcy Mackay. Harpers. \$1.



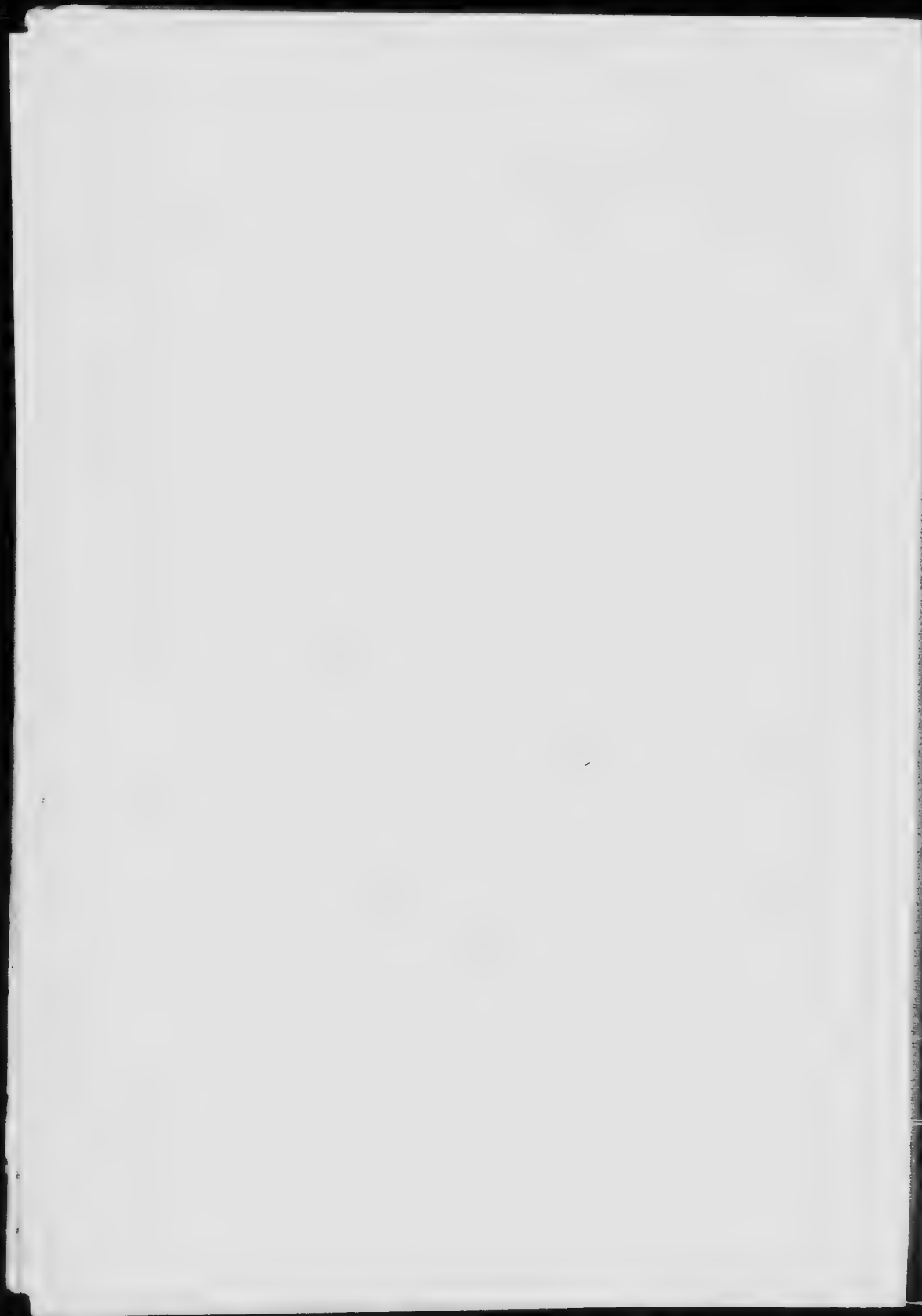
## Tribe Activities

91

SONG OF HIAWATHA, words by Longfellow, dramatization by Florence Holbrook. Published by Houghton, Mifflin Co. \$.15

HIAWATHA'S WEDDING FEAST (Cantata), words by Longfellow, music by S. Coleridge-Taylor. Published by Novello & Co. \$.75

HOLIDAY PLAYS, Marguerite Merington. Duffield. \$1.25.



## **CAMPFIRE STORIES AND POEMS**

**Road to Fairyland**

**The Fairy Lamps**

**Origin of the Bluebird**

**Twin Stars**

**Gitch-e O-kok-o-hoo**

**The Corn-smut Girl**

**The First Gang**

**The Seven Swans**

**How Men Found the Great Spirit**



## CAMPFIRE STORIES AND POEMS

### The Road to Fairyland\*

Do you seek the road to Fairy-  
land?

I'll tell it's easy, quite.  
Wait till a yellow moon gets up  
O'er purple seas by night,  
And gilds a shining pathway  
That is sparkling diamond  
bright.

Then, if no evil power be nigh  
To thwart you, out of spite,  
And if you know the very words  
To cast a spell of might,  
You get upon a thistledown,  
And, if the breeze is right,  
You sail away to Fairyland  
Along this track of light.



### The Fairy Lamps\*

There was once a little bare-legged brown-limbed boy who spent all his time in the woods. He loved the woods and all that was in them. He used to look, not at the flowers, but deep down into them, and not at the singing bird, but into its eyes, to its little heart; and so he got an insight better than most others, and he quite gave up collecting birds' eggs.

But the woods were full of mysteries. He used to hear little bursts of song, and when he came to the place he could find no

\* See Footnote p. 98.

bird there. Noises and movements would just escape him. In the woods he saw strange tracks, and, one day, at length, he saw a wonderful bird making these very tracks. He had never seen the bird before, and would have thought it a great rarity had he not seen its tracks everywhere. So he learned that the woods were full of beautiful creatures that were skilful and quick to avoid him.

One day, as he passed by a spot for the hundredth time, he found a bird's nest. It must have been there for long, and yet he had not seen it; and so he learned how blind he was, and he exclaimed: "Oh, if only I could see, then I might understand these things! If only every bird would wear over its nest this evening a little lamp to show me!"

The sun was down now; but all at once there was a soft light on the path, and in the middle of it the brown boy saw a Little Brown Lady in a long robe, and in her hand a rod.

She smiled pleasantly and said: "Little boy, I am the Fairy of the Woods. I have been watching you for long. I like you. You seem to be different from other boys. Your request shall be granted."

Then she faded away. But at once the whole landscape twinkled over with wonderful little lamps—long lamps, short lamps, red, blue, and groups; wherever he looked were lamps—twinkle, twinkle, twinkle, here and everywhere, until the forest shone like the starry sky. He ran to the nearest, and there, surely, was a bird's nest. He ran to the next; yes, another nest. And here and there each different kind of lamp stood for another kind of nest. A beautiful purple blaze in a low tangle caught his eye. He ran there, and found a nest he had never seen before. It was full of purple eggs, and there was the rare bird he had seen but once. It was chanting the weird song he had often heard but never traced. But the eggs were the marvelous things. His old egg-collecting instinct broke out. He reached forth to clutch the wonderful prize, and—in an instant all the lights went out. There was nothing but the black woods about him. Then on the pathway shone again the soft light. It grew brighter, till in the middle of it he saw the Little Brown Lady—the Fairy of the Woods. But she was not smiling now. Her face was stern and sad as she said: "I fear I set you over-high. I thought you better than the rest. Keep this in mind:

"Who reverence not the lamp of  
life can never see its light."

Then she faded from his view.

## The Origin of the Bluebird\*

Ninna-bo-jou, the Sun-god, was sleeping his winter's sleep on the big island just above the thunder-dam that men call Niagara. Four moons had waned, but still he slept. The frost draperies of his couch were gone; his white blanket was burned into holes; he turned over a little. Then the ice on the river cracked like near thunder. When he turned again it began to slip over the big beaver-dam of Niagara, but still he did not awake.

The great Er-Beaver in his pond flapped his tail, and the waves rolled away to the shore and set the ice heaving, cracking, and groaning, but Ninna-bo-jou slept.

Then the Ice-demons pounded the shore of the island with their clubs. They pushed back the whole river-flood till the channel was dry, then let it rush down like the end of all things, and they shouted together:

"Ninna-bo-jou! Ninna-bo-jou! Ninna-bo-jou!"

But still he slept calmly on. Then came a soft, sweet voice, more gentle than the mating turtle of Miami. It was in the air, but it was nowhere, and yet it was in the trees, in the water, and it was in Ninna-bo-jou, too. He felt it, and it awoke him. He sat up and looked about. His white blanket was gone; only a few tatters of it were to be seen in the shady places. In the snowy spots the shreds of the fringe with its beads had taken root and were growing into little flowers with beady eyes. The small voice kept crying: "Awake; the Spring is coming!"

Ninna-bo-jou said: "Little voice, where are you? Come here."

But the little voice, being everywhere, was nowhere, and could not come at the hero's call.

So he said: "Little voice, you are nowhere because you have no place to live in; I will make you a house."

So Ninna-bo-jou took a curl of birch bark and made a little wigwam and because the voice came from the skies he painted the wigwam with blue mud, and to show that it came from the Sunland he painted a red sun on it. On the floor he spread a scrap of his own white blanket, then for a fire he breathed into it a spark of life, and said: "Here, little voice, is your wigwam." The little voice entered and took possession, but Ninna-bo-jou had breathed the spark of life into it. The smoke-vent wings began to move and to flap, and the little wigwam turned into a beautiful Bluebird with a red sun on its breast and shirt of white. Away it flew, but every Spring it comes, the Bluebird of the

\*See Footnote p. 98.

Spring. The voice still dwells in it, and we feel that it has lost nothing of its earliest power when we hear it cry: "Awake, the Spring is coming!"

### The Twin Stars\*

Two-Bright-Eyes went wandering out  
To chase the Whippoorwill;  
Two-Bright-Eyes got lost and left  
Our teepee—oh, so still!

Two-Bright-Eyes was lifted up  
To sparkle in the skies  
And look like stars—but we know well  
That that's our lost Bright-Eyes.

She is looking for the camp;  
She would come back if she could;  
She is peeping thro' the tree-tops  
For the teepee in the wood.

### The Gitch-e O-kok-o-hoo\*

After the Great Spirit had made the world and the creatures in it, he made the Gitch-e O-kok-o-hoo. This was like an Owl, but bigger than anything else alive, and his voice was like a river plunging over a rocky ledge. He was so big that he thought he did it all himself, and was puffed up.

The Blue Jay is the mischief-maker of the woods. He is very smart and impudent; so one day when the Gitch-e O-kok-o-hoo was making thunder in his throat, the Blue Jay said: "Pooh, Gitch-e O-kok-o-hoo, you don't call that a big noise! You should hear Niagara; then you would never twitter again."

Now Niagara was the last thing the Manitou had made; it never ceases to utter the last word of the Great Spirit in creating it: "Forever! Forever! Forever!"

But Gitch-e O-kok-o-hoo was nettled at hearing his song called a "twitter," and he said: "Niagara, Niagara! I'm sick of hearing about Niagara. I will go and silence Niagara for always." So he flew to Niagara and the Blue Jay snickered and followed to see the fun.

---

\* This and the preceding four stories and poems are from "Woodmyth and Fable," Ernest Thompson Seton. Acknowledgment to Century Co.



When they came to Niagara where it thundered down, the Gitch-e O-kok-o-hoo began bawling to drown the noises of it, but could not make himself heard.

"Wa-wa-wa," said the Gitch-e O-kok-o-hoo, with great effort and only for a minute.

"WA-WA-WA-WA," said the river, steadily, easily, and forever.

"Wa-wa-wa!" shrieked Gitch-e O-kok-o-hoo; but it was so utterly lost that he could not hear it himself, and he began to feel small; and he felt smaller and smaller, until he was no bigger than a sparrow, and his voice, instead of being like a great cataract, became like the dropping of water, just a little

Tink-tank-tink,

Tink-tank-tink.

And this is why the Indians give to this smallest of the Owls the name of "the water-dropping bird."

When the top is wider than the root, the tree goes down.

### The Story of Corn-smut Girl

By permission from "Indian Tales of Long Ago," by Edward S. Curtis.  
Pub. World Book Co., Yonkers, N. Y. \$1.00

In one of the Hopi villages was a handsome young man named Rainbow Youth. Every day before sunrise he practised running, and made offerings to the Sun and to the other gods, that he might become strong and swift. During the day and the night he remained in the house.

One day he announced that he would marry the girl whose corn meal was ground so fine that it would stick to a large shell hanging on his wall. Then all the girls began to grind meal, and to make it just as fine as they could. For all the maidens wished greatly to marry this handsome young man.

One after another they came to the home of Rainbow Youth and threw their meal against the shell. But it always fell to the floor, and the maidens, one by one, would go away ashamed.

Now in this village lived Corn-smut Girl, and she was dark-skinned and dirty. Her brothers teased her, asking why she did not marry Rainbow Youth, and she said she would try. But they laughed and said they did not think Rainbow Youth would keep his promise if her meal should stick to the shell.

When Corn-smut Girl had her meal ready, she took it in a basket to the young man's house. He spoke kindly, and asked her to enter and sit down.

Then he said, "What is it you wish?"

"I have come for you," she answered.

"Very well," said Rainbow Youth.

He took a handful of her meal and threw it against the large shell, and it stuck fast.

"Good!" said he. "It is my own word. I have agreed to marry the girl whose meal stuck to my shell. Your meal has done so. Therefore I go with you."

So the two started to the home of Corn-smut Girl. For when a Hopi man takes a wife, he lives with her family.

The brothers and the mother of Corn-smut Girl were surprised that the handsome youth had married such an ugly girl, but they were glad to welcome him into the family.

the evening mealtime drew near, Corn-smut Girl went to another room. Soon a beautiful young woman came out and sat with the others to eat. Rainbow Youth wondered why his wife did not join them, but he asked no questions.

As bedtime came on, his brothers-in-law explained to him that this beautiful young woman was his bride, Corn-smut Girl. Her dark, smutty skin was really only a mask which she wore during the day. Every day she wore this mask, but at night she removed it and showed her true self to her family. For in truth she was not an ordinary person, but a goddess!

Now the girls who had wished to marry Rainbow Youth were angry and jealous, and they made fun of the young man and his dirty bride. But he did not care, for he knew that his wife was really more beautiful than any of them.

After several years had passed, Corn-smut Girl said that since she was a goddess, it was not right for her to live among mortal people. So with all her family she one day disappeared into the ground. And in the place where she went into the earth the Hopi now pray to Corn-smut Girl as a goddess, begging her to send them good crops of corn.

### The First Gang

From "Around the Fire," by H. M. Burr, Association Press.

The years went by and Om and Sut were almost men. They had trapped the smaller animals, now and then shooting a deer with their arrows or driving one into a pitfall. But now they aspired to bigger game. They wanted to sit with the men about the campfire, to be treated by the women, and especially by the girls of their own age, as if they were grown up. And there was just one way to demonstrate to the satisfaction of

all that they had arrived at man's estate, and that was to prove themselves hunters strong enough and cunning enough to match their wits and weapons against the strength and fury of the bear and the wild buffalo.

They spent long days in the woods together planning and contriving. They provided themselves with bows of the strongest and arrows of the sharpest, with saw-edged knives, lances, and stone axes. For hours they shot at a mark, taking turns and criticising each other's shooting and handling of the bow. Sometimes the men found them and smiled at them indulgently. But the women and girls laughed and jibed at the boys and pretended to be very much alarmed at the idea of two smooth-faced boys going hunting alone in the woods. That made the boys work all the harder and keep more and more by themselves.

Now in a valley, some distance away, there was a herd of wild buffaloes, the most dreaded of all the wild beasts. The bear was ugly only when hungry or wounded. The leopards rarely attacked men in the daylight and in the open. Even the wolves did not like to fight men unless they could take them at a disadvantage. But the buffalo bulls seemed to have in their breasts the concentrated fury of all the savage creatures of the wild. They feared nothing. Their thick hide and powerful muscles defended their vital parts from the arrows and spears of men. They would charge at sight, and when their keen eyes did not detect their enemies their sensitive nostrils did. The only possibility of escape was to climb the nearest tree, and sometimes the mad bull would lie in wait at the foot of the tree till the man dropped from cold or exhaustion. Many men had been already killed. Even the boldest and the hardiest rarely ventured near the buffalo valley. The boys were warned from it as from sure death.

For that reason, perhaps, it had a peculiar fascination for Om and Sut. They talked about it and dreamed about it. They climbed hills from which they could look down into it. They never forgot the time when they first saw the herd in the distance, the bulls feeding on the outside, the cows and calves on the inside. Now and then some young bull would get too bold and rouse the anger of one of the kings of the herd and there would be a terrible battle. When the dust hid the fighters from the boys' sight, they could hear the terrible bellowings.

As time went on, buffalo valley had a greater and greater attraction for the boys. They ventured nearer and nearer. They lay on the bluff overlooking the valley and boasted to each other how they would kill a bullock and carry it back to

their cave homes; and they imagined how envious the men and boys who had been afraid would be and how humble the girls.

But one day they ventured a little too near, and a stray bullock caught sight of the boys and immediately charged. Each boy climbed a tree with a swiftness which did credit to his bringing up, and there they stayed hour after hour during the long day, the bull watching them from blood-red eyes. Now and then he would stroll away to browse and drink, but at the slightest movement would dash back to the foot of the trees where the boys roosted. As night came on the boys grew colder and colder and hungrier and hungrier. They remembered the men who had gone into the buffalo valley and never came back, and they wished they were at home, even though the girls did laugh at them and they had to sit back of the men at the fire.

Finally they escaped, but by good fortune, not by any prowess of their own. A great bear came out of the wood, looking for something to fill his empty stomach. He had missed a deer as it came to drink. He was tired of the roots and ants' nests. He wanted meat—good red meat and plenty of it. When he saw the bullock, he hesitated for a moment, for big as he was he usually passed bulls by; a fight with one was such uncertain business, and even if he killed the bull the appetite was likely to be killed, too. But the bear was very big and the bull not very large, and he was out of sorts and he hesitated too long. The bull spied him and charged instantly. The bear stood up on his hind feet. As the bull struck him, Bruin gave him a blow with his great paw which would have broken the neck of any other animal, and buried his great fangs in his shoulder. But the bull's sharp horns pierced the chest of the bear and bore him back to the ground. Deeper and deeper the cruel horns reached, while the claws of the bear tore great strips from the bull's flanks. It was a terrible spectacle, but the boys were too near to enjoy it. Quick as a flash they slid down and ran up the cliffs above them like two monkeys. At the top they stopped, panting for breath, and looked down into the valley. The air was filled with terrible roarings and bellowings. In the dim light they could see a huge brown mass rolling back and forth below them. Now they thought the bear had won and now the bull.

By and by the dark settled down, and nothing could be seen, the sounds grew fainter, and finally all was still. The boys did not dare to go through the woods in the dark, so they found a bed of leaves and lay down where they were. But there was

not much sleeping that night. A leopard's shrill cry woke them from their first doze; the baying of wolves awakened them from the next; and when a great owl gave his weird wail just above their heads, they gave it up.

The crackling of twigs told them that they were being hunted by some night prowler. In the dark and with no weapons—for they had dropped everything but their knives—they were at the mercy of any wild beast which discovered their hiding place. Then Om remembered the fire which had saved his life when a child, the fire which no animal was bold enough to come near. Could he make a fire. The moss upon which they lay was dry. A rough flake of flint which had not been shaped was in his skin pouch and his flint knife was in his belt. He had seen his father call the Red Spirit from the moss by striking flints together. Once or twice he had succeeded in doing it himself, but it was no easy task. Still there was nothing for it but to try. With trembling hands he gathered the driest of the moss into a little pile and pulled together some dry twigs. Sut got on his knees ready to blow the smallest spark into flame. Om took the flint flake in his left hand and struck it a glancing blow with his knife. A dull spark flew, but did not light the moss. Again and again he tried, but in vain. Meanwhile, soft but ominously heavy footfalls came nearer and nearer. It was now or never. In desperation he struck a terrific blow which shattered the knife and brought the blood to his battered hand. He saw nothing, but Sut suddenly stooped lower and blew gently, and then more strongly. A tiny glow appeared, a wisp of smoke and then a red flame. Om crouched by the fire, exhausted, speechless, and helpless; but Sut skilfully fed the growing flames till they leaped high, and the hunter in the dark leaped away with great bounds into the deep woods.

All night the boys sat by the fire, hungry and exhausted, but happy and safe. In the morning they looked down on the open spot below them which had been the scene of the terrible fight of the night before; and there, still locked together by horn and claw and jaw, were the bear and the bull, both dead and both victorious. A fox came out of the brush and sniffed at the pool of blood in which they lay; a flock of red-eyed buzzards hovered in the air above and finally alighted on a dead tree near by.

The boys were looking with mingled awe and delight at the bodies of their savage foes of the day before, when a brilliant thought came to Sut. "Om! The horns and claws! We will take them to the camp, and who will laugh at us then?" No

sooner thought than done. Down the cliff they clambered, forgetful of everything but the coveted trophies. At the foot they found their weapons where they had dropped them. The fox skulked away, the buzzards screamed and flapped to a little more distant tree, while the boys hacked off with rude knife and stone bludgeon one of the bear's claws and the horns of the bull. Then they fled up the cliff again and started hot foot for home.

As they approached the stream by which they lived, Sut began to hasten, but Om went slower and slower. "Hurry, you snail," said Sut, "the women and girls will be pounding the meal and making ready for the men to eat and they will see by these that we are not boys to be laughed at." "But," said Om, "we did not kill them; we ran away." "Oh! but we don't need to tell all that," said Sut; "hurry up, hurry up!" But Om would not hurry. He went more and more slowly and finally sat down to think it out. The temptation was a very strong one. Perhaps all they would need to do would be to be silent, and it would be very pleasant to be treated like mighty hunters and men. But the trouble was that deep down in their hearts they would know that they had not proved it.

Then a thought came to Om which settled his uncertainty. If it had not been for Odin who sent the bear to fight the bull, and sent the Red One at the prayer of the flints to drive away the leopard, they would not be here and there would be no story to tell. Then he remembered that his father had said that the Great One loved truth as he loved light. He turned to Sut with all his indecision gone. "We will tell the truth! We will not win the man-right by telling a lie." Sut grumbled a little, but yielded, as he always did to the stronger will of Om.

When the boys came to the river bank there was a great shout, and all went out to meet them, for the villagers had grown anxious at their long absence. And they were pleased that no one laughed at them, not even the girls. As the boys were being fed, they told the story of their adventures amid the eager questionings of the home group. The horns of the bull and the paws of the bear were passed about, and the older men told how large the bear must have been from the size of the paw. They then told stories of bears which they had seen and fights of many kinds in the forest till Om and Sut were forgotten. But Om was pleased to notice that his father looked at him with quiet approval in his eyes, and he heard him say to Oma: "Our son will be a great hunter, for his feet are swift and his hands are strong, and his head is chief over them all, and, more

than that, he is beloved by the Great One." And Om was glad.

For a while the boys brooded over their adventure and kept away from the buffalo valley. But the horns and the great claws kept reminding them, and again all their hunting trips seemed to lead toward the dangerous valley. Oma had tried to make Om promise that he would not go there again, but Ang had said: "Do not make him promise. He must prove his man-right as we all have done, and the Great One loves him."

Finally Om said to Sut: "We cannot escape the call of the death valley. Something tells me that we will either leave our bones there or win our man-right. I have been thinking it over, and it seems to me that one of the reasons why so many men have lost their lives there is that they have not used their brains and they have not worked together. Why shouldn't we be the first to do it? My idea is this. We will get together ten boys of our own age and we will have only those who will promise under the sacred oak tree to hunt together and not each for himself. Then we will choose one who shall be to the others as the head is to the hands and feet. All shall obey him. When we have learned to work together, we will go where the cliffs which overlook the buffalo valley draw together, and we will pile great stones where a push will send them crashing down. Then we will keep watch, and some time when the wind blows up the valley and the herd is well up to where the cliffs are too steep to climb, where they come together like two streams, we will pray to the Fire Spirit and take burning brands from the fire and light the tall dead grass at the opening of the valley. Six will start from one side and six from the other, and we must outrun the deer. The buffalo will run from the wall of fire farther and farther up into the narrow part of the valley, and when they are bunched together like fish in a trap we will hurl down great stones and shoot our arrows, and there will be meat enough for all the men of the north country, and every cave shall have its buffalo skin at the going in."

So Om and Sut got the other boys together with great secrecy, and every one was made to take the oath of loyalty to the gang under the sacred oak. And Sut was chosen chief, because he was the best talker. Om could make the plans and carry them out. In the working of the thing Sut did most of the talking, but he always kept his eye on Om and did what Om wanted, and when it came to doing things Om was leader.

For weeks the clan scouted the valley, often having hair-breadth escapes when they ventured too near. It seemed as if



the wind would never be in the right direction when the herd was at the small end of the runway. But the delay was a good thing. The boys learned to hang together and obey the commands of their chief. One boy nearly lost his life by disobeying, but the lesson was learned, and the gang hung together as no boys had ever done since the man-story began.

At last the day came when the lookout reported the herd well up in the narrow end of the valley and the wind blowing in. Nothing was said, but by common consent Om was leader for the day. He sent Sut and five other boys to the south, while he and five more went to the north. Each gang was to build a fire where the smoke would not blow up the valley, and dry torch sticks were made ready to light. At midday, when a spear driven into the ground cast no shadow, Om shot an arrow high into the air. Each boy seized a torch from the fire and dashed across the mouth of the valley, lighting the dry grass as he ran.

It was a wild rush. Never had the boys run as they ran that day. In the years after, they told the tale to their children and grandchildren and they set the pace faster with each telling. In less time than it takes to tell, the boys had spread their net of fire and the wind was drawing it for them.

When the boys reached the cliffs, the frightened herd was already crowding up into the narrow end of the wedge-shaped valley, fleeing in terror from the pursuing wall of fire. Then the boys rolled the great stones down upon the seething mass below them, shooting their arrows till the supply was exhausted. The maddened buffaloes trampled on and gored each other until scarcely more than half the herd escaped alive.

The young hunters, exhausted but triumphant, danced along the ledges, filling the air with savage yells.

The next thing was to send word to the scattered homes. Three boys were left to keep watch, and the rest ran as if running a race to carry the news of the feast that was waiting for all who would come.

Before night every man, woman, and child within a distance of twenty miles was on the spot. Old suspicions were forgotten and old grudges ignored, for the time being, at least. A great fire was built, and the men stripped the hides from the dead buffaloes and the women rolled them up to carry away for tanning. One of the largest of the bulls was dragged to the fire and roasted whole. Far into the night they worked and feasted. Finally, as they stretched themselves about the fire, exhausted but satisfied, Ang spoke:

"I have seen the Cold Spirits come and go many times, but



I have never seen so many men together as now. Men have not been like the wolves, which hunt in packs, or like the buffaloes, which feed in droves, or like the ducks and geese, which come and go in flocks. Each man, with his mate, has lived apart like the bear or the lion. There have been fear and hatred between us because each man feared that some other man would spoil his hunt or rob his traps. And we have lived far apart. To-night we sit about the same fire as some of us have sat before at the feasts of the Great One. As I look into the fire, into the cave of the Red One within it, I see that whenever men come together to hunt, to feast, and there is no hatred in their hearts, it is a feast of Odin. I have told you many times before of the will of Him whose voice I am as I watch the tongues of flame. It is His will that men learn to live together. These boys have heard the whisper in the heart which we have not heard. They have killed more buffaloes since the sun rose this morning than we have done in all our lives and our fathers before us. They have not come to their full strength; they have not learned to shoot as far or as straight as we have done, but together they have done what no one of us could do."

Then Ang picked some long grasses from a tuft beside him and took out a single one. Holding it where all could see, he snapped it as if it were a spider's web; then he put two together and snapped them; afterward more and more until he had twisted a rope of grass which the strongest man could not break. He passed it about the circle, and each tried in vain to break it. Then Ang took it and held it high above his head where all could see, the women and boys as well as the men. "The single grass which the child can break is man alone; this rope of twisted grass is man united."

A shout of assent broke from the group: "It is the will of the Great Spirit." Then Wang, who had been restless in his place, leaped to his feet: "If we are to hunt together like the wolf, we must learn from him. Each pack has its head which all the others obey. When the geese fly to the south, a great bird who is wise always leads the flock. Let us learn from the beasts and the birds. Who shall be our chief?"

They all looked at Ang, and some one said, "Let Ang be our chief." But Ang shook his head: "I have told you for many years the will of Odin. I will do so still as I see it in the fire or hear it in the whisper to the heart, but my eyes do not see as they did, my feet are not so swift in the chase, or my hands so strong at the kill. The head of the wolf pack is the strongest and the most cunning, not the oldest. The whisper within tells me

that it is not time to choose a chief to-night. He must be proven first."

The men looked about on each other and knew that the words of Ang were wise. There was no one that they could all follow without question. The time to choose had not come yet. It came when—— But that is a tale for another telling.

Then Om and Sut and the boys who had followed them were brought into the men's circle by the fire, and they told the story of how they had trapped the buffaloes. It was Sut who told the story, and his eyes shone like stars and his voice bubbled like the brook. As he talked on, Wang would wag his head now and then, as much as to say: "See! Like father, like son." The girls listened eagerly to Sut, but the older ones looked at Om, who sat a little back where the light did not shine so bright on his face, and nodded their heads and said to each other: "Some day, perhaps, if the Great One wills."

From that time on men began to do things together as they had never done before. They hunted together and fished together. Groups of related and friendly families lived near, as Ang and Wang had done. And they had more to eat and more to wear. Fewer lost their lives in hunting the more dangerous animals. The women and children were safer in the little villages than they had been in their lonely caves and huts.

And Om and Sut were remembered in the sagas of the tribe as those who taught men how to live together.

### The Seven Swans

"The Legends of Vancouver," by Pauline Johnson, by permission of publishers, McClelland, Goodchild & Stewart, Ltd., Canada.

"Did you ever know a mother who did not love her crippled baby more than all her other children?" asked the old klootchman,\* glancing up from her basket-weaving, and for a moment allowing her slender hands to lie idly in her lap.

"One always loves the weak ones," I commented. "We admire the strong, we are proud of the deft, the agile; we applaud the skilful, the clever, but we love the weak."

"It is always so," she agreed. "Always so when the one who loves is a mother-woman, and when the weak one is a baby." As she spoke the old klootchman looked away across the canyon; her eyes were very dreamy, and I knew her thoughts were wing-

---

\* Woman.

ing their pathless way back to the olden years and the earlier history of her tribe.

I crouched down beside her, settling comfortably in a natural shelf of rock, and for a time watched in silence the mad tumble of the sleepless Capilano River, as it crowded through the throat of the canyon three hundred feet below us.

A swirl of melodies arose from its myriad waterfalls, its countless rapids—melodies soft and fresh as a robin's whistle, and their singing intensified the fragrance of damp mosses and pungent firs and cedars that frame this most exquisite beauty-spot in British Columbia.

"There are not many song birds here," I remarked. "I sometimes think that Nature so richly favored this wonderful province that she kept the birds for some less beautiful country. Here the forests and the rivers sing to us. Their voices are more like a heavenly orchestra, like unseen hands playing on a thousand strings. The winds, the firs, the whispering rivers, are like Chopin Prelude sobbed from the throat of a violin."

The klootchman looked at me longingly, and I caught myself back—I had been voicing my thoughts unmindful of her dear, uncomprehending mind. I smiled.

"You no savvy what I talk of, eh, klootchman?" I said.

"Some savvy," she answered, using the native phrase with quaint delight.

"What I mean is that here we cannot hope to have everything," I hastened. "The less lovely country east of the Rockies must be given some things that are denied to us. We have so much beauty that Nature balanced things a little by giving the East its song birds."

"Yes," she agreed; "but we have many other birds. The Sagalie Tyee (God) gave us birds for food here, not for song. The winds sing, but cannot feed the Indian people. The waters laugh, but cannot keep us from starving by their pretty voices. So, the Sagalie Tyee gave us the fish and the birds for food—many gray geese, russet pheasants, wild ducks, whistling swans—"

"Oh, klootchman!" I interrupted, "yesterday I saw a band of magnificent white swans fly directly over the city—seven of them. They were heading for the southeast."

She turned abruptly and looked at me with a half-curious, half-affectionate expression illuminating her rugged old face.

"You see seven swans?" she asked with intense interest.

"Yes," I assured her. "Seven wonderful white swans. They were the most graceful things I ever saw. They sailed

overhead like delicate white-winged yachts drifting on the blue sea—the far waterless sea of the skies.”

“Very good sign,” she said emphatically. “Very good luck for you—for sure you count seven of them?”

“Yes,” I assured her. Then I told her how I happened to be at the door of my “wigwam” when I heard a faint whistle skyward, and looking aloft I saw them—seven white-feathered beauties sailing southward into the lands of sun and warmth. I could picture them idling away the winter in some far southern lagoon, while the lazy tropic weeks drifted by as they waited for the call of the North that would come with the early days of April—the sweet clear call of the North that would mean mating time—that would mean days of nesting among the reeds and rocks of cooler climes, and a long, joyous summer in the far reaches of the upper Pacific Coast.

I watched them for many moments; their slender white throats were outstretched with the same keen eagerness to reach the southern suns as a finely bred horse displays near the finish of a race. Their shining pinions were like silken sails swelling to the breeze, and lofty as their flight was, I could distinguish a hint of orange from the web of their trailing feet. Their indifference to the city beneath them, their direct though deliberate course, their unblemished whiteness were like a glimpse of some far perfect thing that human hands may not defile. Farther and farther they winged their way, fainter and fainter drifted backward their clear whistling, until they were but a blur against the blue; like an echo of a whisper their voices still floated behind them, then a pearl-gray scarf of cloud enveloped them—they were gone.

The klootchman listened like one absorbed. “Very good sign,” she repeated, as I concluded my story.

“In what way?” I asked.

“What is it the palefaces call the one who loves you?” she questioned. Then answering her own query with: “Sweetheart—is that not it? Yes? Well, sign is, your sweetheart very true to you. He not got two faces, one for you, another for when he is away from you. He’s very true.”

I laughed sceptically. “A woman’s sweetheart is never true to her, but a man’s always is,” I remarked, with a cynicism born of much observation and some little experience.

“You know the big world too well for be happy,” she began.

“Oh, I am the happiest-hearted woman alive,” I hurried to explain. Then, teasingly, “and I’ll be happier still if what you say of the seven swans is really true.”

"It's true," she replied in a tone that compelled belief. "It is strange thing that you see and talk of seven swans, when an hour ago I speak to you of crippled baby and how the mother-women love them, care for them, protect them. You see, tillicum (friend), there is a Squamish story—what you call it? Legend? Yes, legend about a crippled child and a band of seven swans."

I edged nearer to her. Then she told me the whimsical tale, while the restless Capilano murmured and chanted, laughed and rollicked, sang and sobbed out its music far, far below us.

"The little girl was born a cripple. There was not ugliness, nothing crooked in her form, just one little foot that was weak and limp and nerveless, and when she learned to walk, this foot trailed slightly behind the other. But, oh! the love of her Squamish mother that hovered over her, protected her, petted her, nursed her, waited on her; it was the all-powerful love of a mother-woman for a weak child, and the baby grew into girlhood, then to womanhood, wrapped around with this wonderful garment of love, as the clinging fragrant moss wraps the foot of a tree.

"Her mother called her 'Kah-lo-ka' (accent on lo), which in the Chinook means 'The Swan,' for the girl was very beautiful. Her face was as a flower, her form slender and filled with grace, only the trailing foot stood between her and the perfection of young womanhood. But her soul was yet more beautiful than her face. She was kind, joyous, laughter-loving. She never said a bitter word, never gave a sneering smile. Her heart was light, her hands skilful, her voice gentle. Her fingers were swift to weave baskets and blankets, her eyes keen and lustrous in selecting the dyes for the quills and fibres and furs, for her home-making and her garments, and she loved little children as her mother had done before her.

"And many a brave wanted her for his wife—many a young fisherman, many a warrior, many a trapper, but her heart loved none, until a young hunter came from the North, and said, 'I will be strong for both of us: I will be fleet of foot for both. My arrows are true and never fail; my lodge is filled with soft, warm furs, your frail little feet will rest upon them, and your heart will rest in my heart—will you come?'

"The shadows crossed her face as she looked at her trailing foot. 'But I can never run to meet you when you return from the forest with the deer across your shoulders or the beaver across your arm,' she regretted. 'My step is slow and halting, not swift like the other maidens of my tribe. I can never dance

for you at the great potlatches for hours and hours, while the old people sing and the young people admire. I must sit with the old women—alone with the old ones and the ugly ones—alone!’

“‘You will never be old, never be ugly,’ he assured her. ‘Your face and your soul are things of beauty. They, with your laughing heart, will always be young. Your mother named you Kah-lo-ka, The Swan, and you are always that—shall ever be that to me. Come, will you come with me—will you come from your mother’s love—to mine?’

“And, womanlike, she went with him, and her father’s lodge knew her no more.

“But daily her mother would come to see her, to rejoice in the happiness of the young wife—the happiness that made her forget her trailing foot, that made her ever-lovely face still more beautiful, and she would call the little bride-wife, ‘Be-be, Be-be,’ as though she were still her frail baby girl. It is the way with mothers and a crippled child.

“The years drifted on, and Kah-lo-ka bore her hunter-husband six beautiful children, but none of them had the trailing foot, nor yet the lovely face of their laughter-loving mother. She had not yet grown old to look upon as the Squamish women are apt to do while even yet young, and her face was like a flower as she sat among the old and ugly at the great potlatches, while the maidens and the young men danced and chanted, and danced again. How often she longed to join them none ever knew, but no shadow ever blurred her eyes, no ache ever entered her always young heart until the day her husband’s cousin came, a maiden strong, lithe, tall as the hunter himself, and who danced like the sunlight on the blue waters of the Pacific.

“For hours and hours this cousin would dance tirelessly, and through all the hours he watched her, watched her sway like the branches of the Douglas fir when storm beaten, watched her agile feet, her swift, light steps, her glorious strength, and when she ceased, Kah-lo-ka’s husband and the young braves and warriors gathered about her with gifts of shell necklaces and fair speeches.

“And Kah-lo-ka looked down at her own poor trailing foot—and the laughter died in her eyes. In the lodge with her six little children about her she waited for him many days, many weeks, but the hunter-husband had left her for one who had no trailing foot to keep her sitting among the old and the ugly.

“So Kah-lo-ka waited, and waited, long, long years through,

and the friends of her youth grew old and wrinkled, her tribespeople grew infirm and feeble with age, but the face of the woman with the trailing foot remained as beautiful, as young, as unlined as when she first met and loved the young hunter who had gone out of her life many scores of moons ago.

"And far away in his distant lodge the hunter-husband grew old and weakened in body and mind; his aim was no longer sure, his eye no longer keen, and at his side sat his cousin, she who was once so light of foot, so joyous in the dance, so strong and straight and agile, but the years had weighted her once swift feet, had aged her face, had stooped her shoulders, had stiffened her muscles, her ankles, her hands. Old and wrinkled she crouched in her blanket, for her blood ran slowly, her youth was gone—she danced no more.

"And one day he returned to look upon her whom he had left, to hear her laugh, and to learn that a true woman's love will keep her young and flowerlike forever. With a great cry he bowed himself before her, and though he was old and feeble and ugly, although he was false and had failed her, and had forgotten her—womanlike she outstretched her arms toward him, for was he not the father of her children?

"But the Sagalie Tyee (the Almighty) spoke out of the sky, and His word is law to all races, to all people: 'You shall not have her again, O Hunter!' spoke the voice. 'You have been untrue. She has been true. Untruth cannot mate with truth, dishonor cannot mate with honor, falsity cannot mate with fidelity. I, the Sagalie Tyee, chief of the skies and of earth and of the seas, shall place her and her children where their youth and their beauty and their laughter shall forever taunt and reproach your crooked, misshapen heart. They shall never grow old or ugly, and she with her trailing foot shall become that most beautiful and graceful thing that I have ever created. Watch the morning skies, O Hunter of the double face, the double heart, and on the first light of the rising sun you will see seven perfect things, Beauty, Grace, Laughter, Youth, Fidelity, Love, and Truth—seven glorious things that you have forfeited, have cast aside!'

"In the morning the aged hunter sought Kah-lo-ka's lodge. It was empty, but against the gold of the rising sun there arose a group of seven pearl-white swans. They poised above him for a moment, then winged their way southward. He watched in an agony of loneliness their graceful flight; he listened in an agony of heartache to their clear, wild piping laughter that drifted backward like the notes of a distant flute; his aged eyes



watched and watched as those seven beautiful birds sailed away on wings like silken webs, and whose feet trailed a blur of orange against the blue of the morning sky. He bowed his head then—for he knew that those trailing, graceful feet were his Kah-lo-ka's one defected—glorined."

"Do they always travel in flocks of seven?" I asked.

"Not always, but often so," she replied. "So when you count seven white ones, it will be sure to be Kah-lo-ka and her children; that is why I say you have good luck, and a true sweetheart. It is only an old Indian story, but it means much."

"I suppose, klootchman, it means that like begets like?" I half questioned. "That truth bears truth. That fidelity bears fidelity—is that it?"

"Yes, did not the Sagalie Tyee say that truth could not mate with untruth?" she said very reverently.

### How Men Found the Great Spirit

From "Around the Fire," by H. M. Burr. Permission Association Press.

In the olden time when woods covered all the earth except the deserts and the river bottoms, and men lived on the fruits and berries they found and the wild animals which they could shoot or snare, when they dressed in skins and lived in caves, there was little time for thought. But as men grew stronger and more cunning and learned how to live together, they had more time to think and more mind to think with.

Men had learned many things. They had learned that cold weather followed hot, and spring, winter; and that the sun got up in the morning and went to bed at night. They saw that the great water was kindly when the sun shone, but when the sun hid its face and the wind blew upon it, it grew black and angry and upset their canoes. They had found that knocking flints together or rubbing dry sticks would light the dry moss, and that the flames which would bring back summer in the midst of winter and day in the midst of night were hungry and must be fed, and when they escaped devoured the woods and only the water could stop them.

These and many other things men learned, but no one knew why it all was or how it came to be. Men began to wonder, and that was the beginning of the path which led to the Great Spirit.

In the ages when men began to wonder there was born a boy



whose name was Wo.\* As he lay in his mother's arms, she loved him, but wondered: "His body is of my body, but whence comes the life—the spirit which is like mine and yet not like it?" And his father, seeing the wonder in the mother's eyes, said, "Whence came he?" And there was no one to answer, and so they called him Wo, to remind them that they knew not whence he came.

As Wo grew up, he was stronger and swifter of foot than any of his tribe. He became a mighty hunter. He knew the ways of all the wild things and could read the signs of the season. As he grew older, they made him a chief and listened while he spoke at the council board, but Wo was not satisfied. His name was a question, and questioning filled his mind.

Whence did he come? Whither was he going? Why did the sun rise and set? Why did life burst into leaf and flower with the coming of the spring? Why did the child become a man and the man grow old and die?

The mystery grew upon him as he pondered. In the morning he stood on a mountain top and, stretching out his hands, cried, "Whence?" At night he cried to the moon, "Whither?" He listened to the sighing of the wind in the trees and to the song of the brook and tried to learn their language. He peered eagerly into the eyes of little children and tried to read the mystery of life. He listened at the still lips of the dead, waiting for them to tell him whither they had gone. He went about among his fellows silent and absorbed, always looking for the unseen and listening for the unspoken. He sat so long silent at the council board that the elders questioned him. To their questioning he replied like one awakening from a dream:

"Our fathers since the beginning have trailed the beasts of the wood. There is none so cunning as the fox, but we can trail him to his lair. Though we are weaker than the great bear and buffalo, yet by our wisdom we overcome them. The deer is more swift of foot, but by craft we overtake him. We cannot fly like a bird, but we snare the winged one with a hair. We have made ourselves many cunning inventions by which the beasts, the trees, the wind, the water, and the fire become our servants.

"Then we speak great swelling words: 'How great and wise we are! There is none like us in the air, in the wood, or in the water!' But the words are false. Our pride is like that of a partridge drumming on his log in the wood before the fox leaps

---

\*Wo meant, in the language of the time, "whence."

upon him. Our sight is like that of the mole burrowing under the ground. Our wisdom is like a drop of dew upon the grass. Our ignorance is like the great water which no eye can measure.

"Our life is like a bird coming out of the dark, flittering for a heartbeat in the hut and then going forth into the dark again. No one can tell us whence it comes or whither it goes. I have asked the wise men, and they cannot answer; I have listened to the voice of the trees and wind and water, but I do not know their tongue; I have questioned the sun and the moon and the stars, but they are silent.

"But to-day in the silence before the darkness gives place to light I seemed to hear a still small voice within my breast saying to me: 'Wo, the questioner, rise up like the stag from his lair; away, alone to the mountain of the sun. There thou shalt find that which thou seekest.'

"I go, but if I fall by the trail another will take it up. If I find the answer, I will return."

Waiting for none, Wo left the council of his tribe and went his way toward the mountain of the sun. For six days he made his way through the trackless woods, guided by the sun by day and the stars by night. On the seventh day he came to the great mountain—the mountain of the sun, on whose top, according to the tradition of his tribe, the sun rested each night. All day long he climbed, saying to himself: "I will sleep to-night in the hut of the sun, and he will tell me whence I came and whither I go."

But as he climbed, the sun seemed to climb higher and higher. As he neared the top, a cold cloud settled like a night bird on the mountain. Chilled and faint with hunger and fatigue, Wo struggled on. Just at sunset he reached the top of the mountain, but it was not the mountain of the sun, for many days' journey to the west the sun was sinking in the Great Water.

A bitter cry broke from Wo's parched lips. His long trail was useless. There was no answer to his questions. The sun journeyed farther and faster than men dreamed, and of wood and waste and water there was no end. Overcome with misery and weakness, he fell upon a bed of moss with his back toward the sunset and the unknown.

And Wo slept, although it was unlike any sleep he had ever known before, and as he slept he dreamed. He was alone upon the mountain waiting for the answer. A cloud covered the mountain, but all was silent. A mighty wind rent the cloud and rushed roaring through the crags, but there was no voice in

the wind. Thunder pealed, lightning flashed, but he whom Wo sought was not there.

In the hush that followed the storm Wo heard a voice low and quiet, but in it all the sounds of earth and sky seemed to mingle—the song of the bird, the whispering of the trees, and the murmuring of the brook:

“Wo, I am He whom thou seekest; I am the Great Spirit; I am the All-Father. Ever since I made man of the dust of the earth and so child of the earth and brother to all living things, and breathed into his nostrils the breath of life, thus making him my son, I have waited for a seeker who should find me. In the fullness of time thou hast come, Wo, the questioner, to the Answerer.

“Thy body is of the earth and to earth returns; thy spirit is mine; it is given thee for a space to make according to thy will; then it returns to me better or worse for thy making. Thou hast found me because thy heart was pure and thy search for me tireless. Go back to thy tribe and be to them the Voice of the Great Spirit. From henceforth I will speak to thee and to the seekers that come after thee in a thousand voices and appear in a thousand shapes. I will speak in the voices of the wood and streams and of those you love. I will appear to you in the sun by day and in the stars by night. When thy people and mine are in need and wish for the will of the Great Spirit, then shall my spirit brood over thine and the words that thou shalt speak shall be my words.”

And Wo awoke, facing the east and the rising sun. His body was warmed by its rays. A great gladness filled his soul. He had sought and found, and prayer came to him like song to the bird:

“O Great Spirit, Father of my spirit, the sun is Thy messenger, but Thou art brighter than the sun. Drive Thou the darkness before me. Be Thou the light of my spirit.”

As Wo went down the mountain and took the journey back to the home of his people, his face shone, and the light never seemed to leave it, so that men called him “He of the Shining Face.”

When Wo came back to his tribe, all who saw his face knew that he had found the answer, and they gathered again about the Council Fire to hear. As Wo stood up and looked into the eager faces in the circle of the fire, he remembered that the Great Spirit had given him no message and for a moment he was dumb. Then the words of the Great Spirit came to him again: “When thy people and mine shall need to know my will, my spirit

shall brood over thine and the words that thou shalt speak shall be my words." Looking into the eager faces full of longing and questioning, his spirit moved within him and he spoke.

"I went, I sought, I found the Great Spirit, who dwells in the earth as your spirits dwell in your bodies. It is from Him the spirit comes. We are His children. He cares for us more than a mother for the child at her breast, or the father for the son that is his pride. His love is like the air we breathe; it is about us; it is within us.

"The sun is the sign of His brightness, the sky of His greatness, and mother-love and father-love and the love of man and woman are the signs of His love. We are but children; we cannot enter into the council of the Great Chief until we have been proved, but this is His will, that we love one another as He loves us; that we bury forever the hatchet of hate; that no man shall take what is not his own, and the strong shall help the weak."

The chiefs did not wholly understand the words of Wo, but they took a hatchet and buried it by the fire, saying, "Thus bury we hate between man and his brother," and they took an acorn and put it in the earth, saying, "Thus plant we the love of the strong for the weak." And it became the custom of the tribe that the great council in the spring should bury an axe and plant an acorn.

Every morning the tribe gathered to greet the rising sun, and with right hands raised and left upon their hearts prayed, "Great Spirit, hear us; guide us to-day; make our wills Thy will, our ways Thy ways."

And the tribe grew stronger and wiser than all the other tribes of men.

#### Books Recommended

- AROUND THE FIRE, H. M. Burr. Association Press. \$.75  
LEGENDS OF VANCOUVER, E. Pauline Johnson. McClelland, Goodchild & Stewart.  
THE GAUNT GRAY WOLF, Dillon Wallace. Fleming Revelle. \$1.25  
WILD ANIMALS I HAVE KNOWN, Ernest Thompson Seton. Scribners. \$1.75  
WILD ANIMAL WAYS, Ernest Thompson Seton. Doubleday, Page & Co. \$1.50  
INDIAN TALES OF LONG AGO, Edward S. Curtis. \$1.00

k shall  
ng and

vells in  
m Him  
s more  
for the  
e; it is

great-  
an and  
ve can-  
re been  
e loves  
n shall  
k."  
o, but  
"Thus  
ook an  
love of  
of the  
an axe

an, and  
"Great  
ur ways  
e other

oodchild

25  
cribners.  
ge & Co.

## SECTION III

### THINGS TO KNOW AND DO

---

#### CHAPTER I—CITY WOODCRAFT

#### CHAPTER II—CAMPERCRAFT

#### CHAPTER III—WOODLORE AND HANDICRAFT

#### CHAPTER IV—FRIENDS IN THE OUT OF DOORS

### Chapter I

#### City Woodcraft

Woodcraft in Town

Wireless for Woodcrafters

Totems in Town

Fire—Servant or Master?

Sleep Outdoors

Health

A Good Body

The Life Force

Health Hints

#### Ready Help

Patriotism and Citizenship

Hiking

Sign Language

Picture Writing

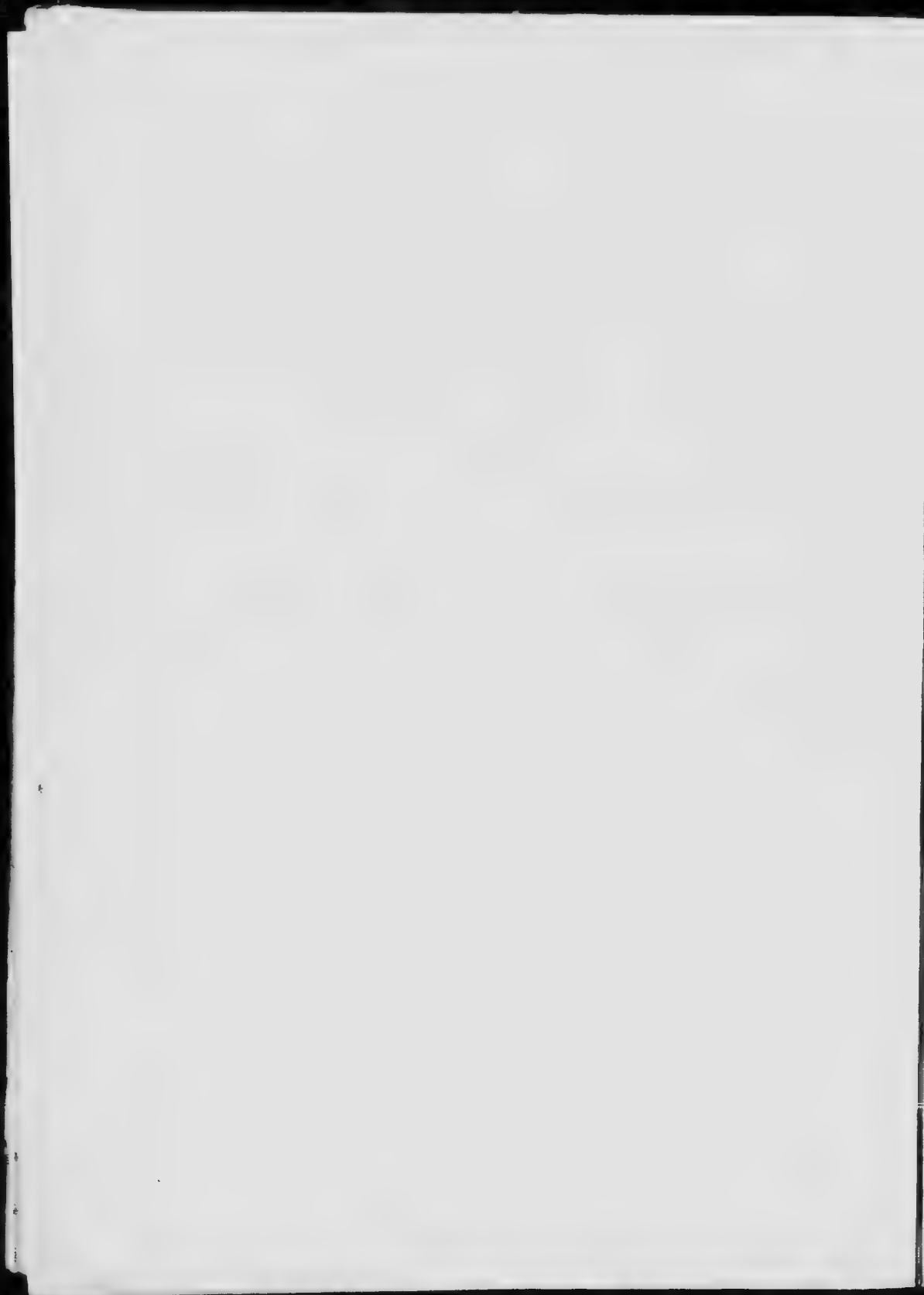
Weather Signals

Railroad Signals

Roof Camping

Individual Tally Books

Names for Months



## CHAPTER I

### CITY WOODCRAFT

#### Woodcraft in Town

Woodcraft in the beginning was the only science of man. It meant masterful touch with the things of his daily life, indoors and outdoors, near or far. So, also, by growth and transference we define Woodcraft in our city to-day as seeing, comprehending, and mastering the ordinary things of our daily life.

The boy or girl who looks both ways before crossing the street, who knows what all the signs on the lamp-post mean, who avoids breathing through the mouth, especially when there is dust flying, who knows the warnings of the different colored lights, who knows the number on the motor car that rushed by so recklessly, who keeps the chest expanded and the toes nearly straight in walking, who can tell a man's track from a woman's or a young man's from that of an old man on the wet pavement, who realizes that the telephone book is the key to the business life of a city, who recognizes and acts on all the hand signals given by the traffic policeman—he is practising good Woodcraft and cultivating something that in the life-game spells "SUCCESS."

There are three separate fields for Woodcraft in the city.

The first is that of the incidental things of wild life that are found in our parks, suburbs, and water front. No less than one hundred forest trees, one hundred wild flowers, sixty different wild birds, twenty different furry four-foots, a dozen turtles, snakes, etc., are found in New York City, while ever the same, overhead, are the stars.

The second field is in the museums and libraries. Every one of our great cities is rich in material of priceless value, gathered here from the wilderness, stuff really relating to Woodcraft. The material is composed not only of collections of birds, animals, trees, etc., but of robes, boats, songs, dances, ceremonies, legends, pictures, carvings, and a myriad of things that stir the loving imagination of the red-blooded, blue-sky boy or girl.

But the last is the largest and most important department, for

it offers the newest field of purely city work. These are some of its headings:

*Signs and blazes* on the main street (a blaze or Indian sign is understood to be a simple mark conveying information without using words or letters). There are on Broadway at least fifty signs and blazes descended from those used in the wilderness by savages; in some cases the very same mark is used. A totem is a simple form, usually a natural form used as the symbol of a man, a group of men, or an idea. It has no reference to words, letters, or language. In this light, there are 200 or 300 totems of daily use in every big city. Some trademarks and all armorial bearings are of the nature of totems. Every great railway company has a totem, though it was not so fifty years ago. The change has come because a totem is copyrightable, rememberable, advertisable, visible afar and comprehensible by all, no matter what the language or lack of learning may be.

The old sign language of the plains exists among us to the extent that over one hundred of the gesture signs are in daily use among the school children and the folk from Southern Europe. The policeman regulating the traffic uses at least fifteen of these signs daily and hardly realizes it, yet every one understands them and obeys. Here they serve the same purpose as in the wilds; they convey information when it is impossible to be heard and they do it in the universal language of ideas which all can comprehend no matter what his speech may be.

*The tracks* of different human beings as well as of dogs, cats, rats, mice, horses, sparrows, etc., are seen after every shower, when the gutter is wet and the pavements dry, as well as after a snowstorm; and they all have a story to tell to the eyes of woodcraft wisdom.

*City craft*—the knowledge of the things which are particularly a development of the city: how the streets are paved, how the garbage is disposed of, where the city water is obtained and its quality, these and many other things relating to making life in the city produce the best results, are an open field.

All of these and a thousand more are to be found in the city. And the value of city Woodcraft is not merely in the things themselves but in being able to see the things about you. Begin to-day to see, comprehend, and master the ordinary daily things of your life.



# WIRELESS FOR WOODCRAFTERS

BY A. FREDERICK COLLINS

Every *Woodcrafter* ought to be able to send and receive messages over long distances by every known means including smoke signals, wig-wagging, heliography, and *wireless*, and the last named method is to my way of thinking the most useful and interesting.

There are three parts to every wireless set and these are (1) an *aërial wire system*, (2) a *sending apparatus*, and (3) a *receiving apparatus*; and you can buy all of it ready to put up, or if you like to use tools you can make all of the parts yourself, except the *head telephone receivers*, as thousands of other wireless fellows have done before you.

## The Aërial Wire System

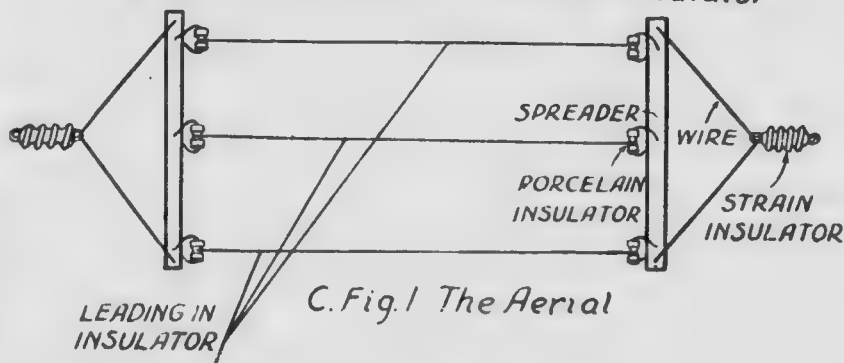
**THE AËRIAL.** The aërial wire system, or just *aërial* as it is called for short, is formed of two or three No. 14 *aluminum*, or *stranded copper* wires stretched as high above the ground as you can get them. These wires must be insulated from the poles, or whatever they are fastened to, and to do this six *porce-*



A. Fig. 1  
A Porcelain Insulator



B. Fig. 1  
A Strain Insulator



lain insulators, as shown at A in Fig. 1, and two *strain insulators*, as shown at B in Fig. 1, are needed. Each end of each wire, which should not be less than thirty feet long, is fastened to a

porcelain insulator and the latter is in turn fastened with a bit of wire to a *spreader*, that is a strip of wood one inch thick, three inches wide, and four feet long. Each spreader is then fastened to a strain insulator as shown at C in Fig. 1 when the aerial is hoisted and fixed to the supports; and don't forget that the higher the aerial and the longer the wires the greater the distance to which messages can be sent and received.

### The Ground

Next in importance to a high, long, and well-insulated aerial is the *ground*, and there are several ways of getting a pretty good

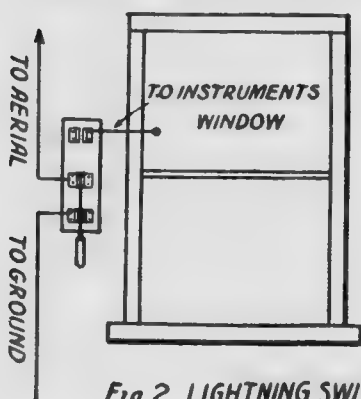


Fig. 2 LIGHTNING SWITCH

one. The first way is to use the gas or water pipes and to solder a No. 6 bare copper wire to it, or fasten it on with a *ground clamp*; another way is to drive a piece of iron pipe into the ground deep enough to reach moist earth, but the best way of all is to solder a copper wire to a sheet of copper, or zinc, three feet wide and four feet long and bury it deep into the moist earth. To make an aerial a safety device rather than a source of danger from lightning it should be *grounded*, when you are not sending or receiving, through an aerial switch as shown in Fig. 2. This switch is screwed to the outside of your operating room near the window where the aerial and ground wires go through to the inside.

### The Sending Apparatus

To send messages you will need the following pieces of apparatus: (1) an *induction coil*, or better a *transformer*, (2) a *telegraph key*, (3) a *spark-gap*, (4) a *battery*, or if your house is wired you can tap the circuit and get your current from that source, (5) a *tuning coil*, and (6) a *condenser*.

**THE INDUCTION COIL, OR TRANSFORMER.** The purpose of an *induction coil* is to change the *direct current* of a battery or lighting circuit into *high pressure alternating currents*. A *transformer* is used where *alternating current* only can be had. A transformer is better and cheaper than an induction coil, having the same

sending range and should be used if you can get alternating current to work it with.

**THE TELEGRAPH KEY.** The purpose of the key is to break up the battery or lighting current which energizes the primary coil of the induction coil, or the transformer, into dots and dashes representing the letters of the alphabet, or *International Morse Code* as it is called. The key is connected in circuit with the primary of the coil and the battery or other source of current.

**THE BATTERY OR POWER CIRCUIT.** From either the one or the other the power to operate your induction coil or transformer is

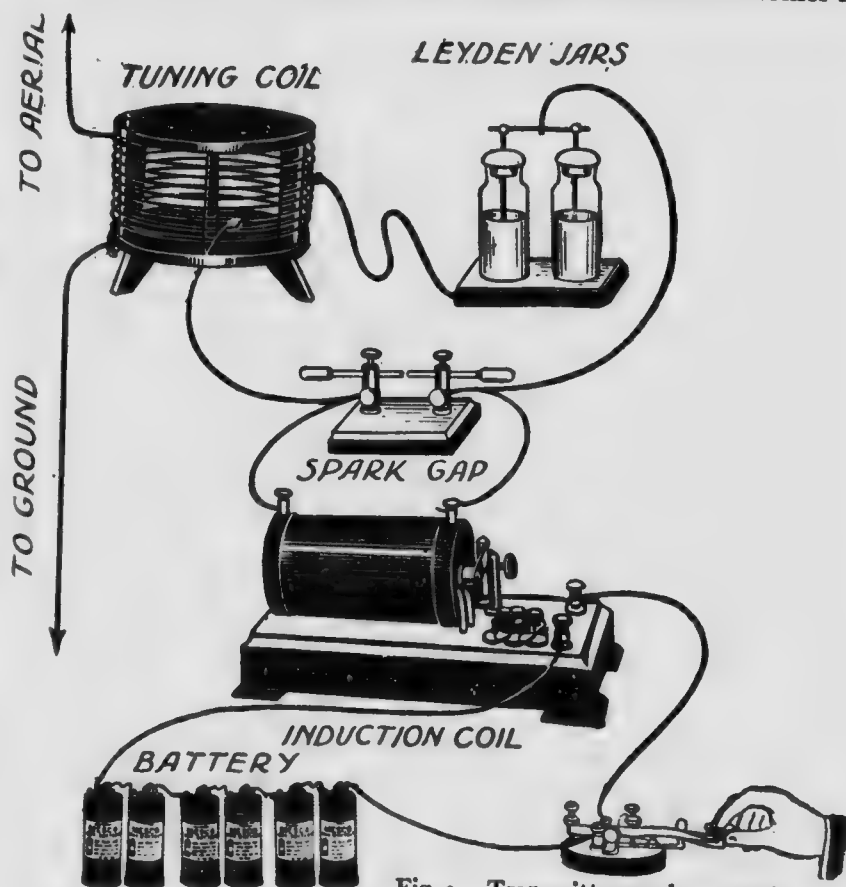


Fig 3. Transmitter ready to send

had. If current from a lighting circuit is used a *variable resistance* must be connected in the primary circuit to cut down the current to the amount required.

**THE SPARK-GAP.** This is simply a pair of brass rods fitted with

brass balls and insulated handles which slide through a pair of brass standards fixed to a marble or other insulating base. The spark-gap is connected to the *terminals*, that is the ends of the wires of the *secondary coil*.

**THE TUNING COIL.** The *tuning coil* of the sending apparatus is simply a coil of heavy brass or copper wire one eighth or one fourth inch in diameter, wound in a *helix* around a wooden frame, and it is used to enable the operator to give the *electric waves* sent out by the *aërial* a certain length in order to conform to the *Government Regulations*. The tuning coil is connected in circuit with the spark-gap and the condenser, and the *aërial* and ground wires are connected to it as we shall presently see.

**THE HIGH TENSION CONDENSER.** This can be either a battery of Leyden jars or it can be made of a number of sheets of glass covered with tin-foil. The *sending condenser* must be proportioned to the size of the tuning coil and the larger it is, within certain limits, the shorter and thicker the spark at the gap will be and the more effective the electric waves that are sent out by the *aërial*.

### Connecting Up the Transmitter

When you have made or bought all of these pieces of apparatus connect them up as shown in Fig. 3 with No. 14 copper wire, which should be insulated, that is the primary of the induction coil, or transformer; the battery, or other source of current, and the key are connected in *series* as it is called.

Next the spark-gap, the condenser, and the tuning coil are connected in series and then the end of the *aërial* wire is connected with the top binding post of the tuning coil, while one of the clips of the tuning coil and the ground wire are connected together, all of which is clearly shown in Fig. 3.

Before sending wireless telegraph messages with this or any other set you must have a *Government* license and the way to obtain a license is fully explained in a pamphlet entitled *Radio Communication Laws of the United States* and which you can get by sending fifteen cents to the *Superintendent of Documents, Government Printing Office, Washington, D. C.*

**THE INTERNATIONAL MORSE CODE:** The following code is used throughout the world on land and sea for sending wireless telegraph messages and for this reason it is called the *International Morse Code*.

It is a little different from the ordinary Morse Code, but it is easier to learn than the latter. You must be able to send at

least five words per minute before you can obtain a Government license.

## The Receiving Apparatus

A wireless receiver is easily made, that is all except the head telephone receiver, or you can buy the whole receiving apparatus ready made. Many boys have only receiving stations, for a license is not required to *listen in* and wherever you live you are

## The International Morse Code

<b>A</b> • — • —	<b>B</b> • — • • •	<b>C</b> • — • — • —	<b>D</b> • — • •	<b>E</b> •	<b>F</b> • • — • — •
<b>G</b> • — • — • —	<b>H</b> • • • • •	<b>I</b> • •	<b>J</b> • — • — • — • —	<b>K</b> • — • — • —	
<b>L</b> • — • • •	<b>M</b> • — • — • —	<b>N</b> • — •	<b>O</b> • — • — • — • —	<b>P</b> • — • — • — •	
<b>Q</b> • — • — • — • —	<b>R</b> • — • •	<b>S</b> • • •	<b>T</b> • —	<b>U</b> • • — • —	
<b>V</b> • • • • — • —	<b>W</b> • — • — • —	<b>X</b> • — • • • — • —	<b>Y</b> • — • — • — • —		
<b>Z</b> • — • — • — • —	<b>Wait</b> • — • — • • •	<b>Understand</b> • • • — • — • —	<b>Don't Understand</b> • — • • • — • — • —		
<b>Period</b> • • • • •	<b>Interrogation</b> • • — • — • — • —	<b>Exclamation</b> • — • — • — • — • —			
<b>1</b> • — • — • — • — • —	<b>2</b> • • — • — • — • —	<b>3</b> • • • — • — • —			
<b>4</b> • • • • — • —	<b>5</b> • • • • •	<b>6</b> • — • • • • •	<b>7</b> • — • — • — • —		
<b>8</b> • — • — • — • • •	<b>9</b> • — • — • — • — • —	<b>0</b> • — • — • — • — • —			
<b>Call</b> • — • — • — • —	<b>Finish</b> • — • — • — •	<b>or</b> • — • —			

almost sure to be within signaling range of some other station. A receiver consists of (1) a *crystal detector*, (2) a *tuning coil*, (3) a *variable condenser*, and (4) a pair of *head telephone receivers*.

A **CRYSTAL DETECTOR**. A crystal detector in its simplest form is merely *phosphor-bronze*, or a *German silver*, point pressing gently on a crystal of *silicon* or of *iron pyrites*. A metal frame-

work screwed to a hard rubber base is used to hold the crystal in place and to provide the means for obtaining the right pressure of the point on the crystal.

**THE TUNING COIL.** This is made by winding a single layer of No. 20 or 22 insulated copper wire on a cylinder of wood, glass, or other material; the insulation of the wire is scraped off in two parallel lines the length of the coil and two springs sliding on brass rods make contact with the turns of wire.

The *tuner*, as it is sometimes called, is used to *tune in* any station, that is to adjust the aerial wire and circuits of your receiver to the wave length sent out by the station which you want to listen to. It is also useful to *tune out* interfering signals and to make the received signals ring clear and loud in the receiver.

**THE CONDENSER.** The best kind of a receiving *condenser* is of the *variable type*. It is made of a number of thin sheet brass

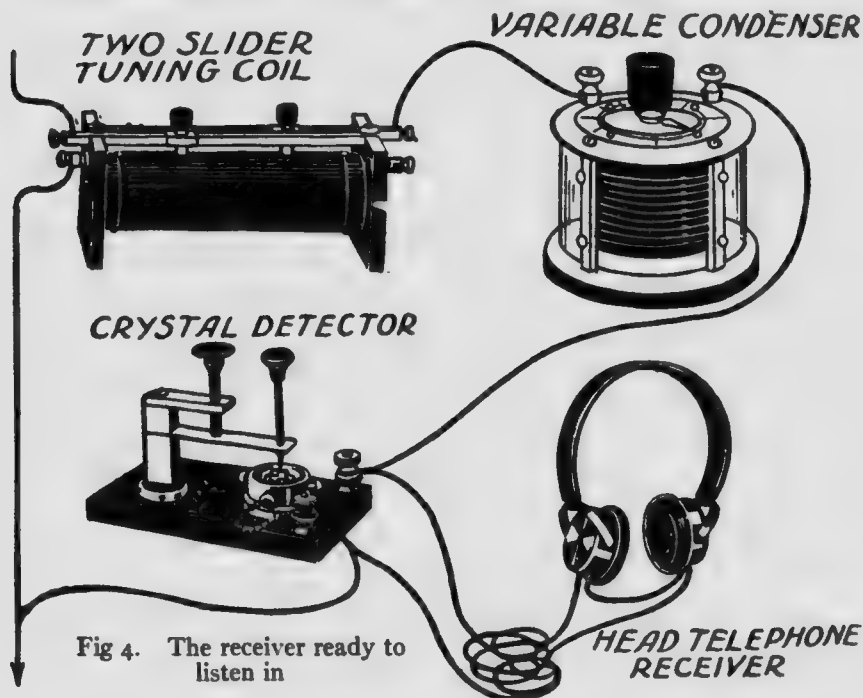


Fig 4. The receiver ready to listen in

semicircles, called *leaves*, half of which are fixed in position and the other half, which alternate with the fixed leaves, are made movable. The movable leaves can be turned by means of a knob and very sharp tuning can be obtained when it is used in connection with the tuning coil.

**THE TELEPHONE RECEIVERS.** To receive over long distances

a good pair of head telephone receivers must be used. A receiver wound to 500 ohms resistance is good enough to receive over distances of 100 miles or so, but for longer distances each receiver should be wound to 1,000 ohms resistance. In buying your receiver be sure that it is wound with copper wire and not German silver wire, as a receiver wound with the last-named kind of wire is not nearly as sensitive as one wound with the former kind of wire though the resistance of both may be the same.

## Connecting Up the Receiver

Having all the parts of the receiver the next thing to do is to *hook them up*, that is connect them together. If you intend to receive only, then connect one of the binding posts of the tuning coil with the aërial wire and connect the ground wire with one of the sliding contacts.

The other sliding contact is joined to one of the binding posts of the variable condenser and the other post of the condenser leads to one of the posts of the detector, while the other post of the detector is connected with the ground wire. The telephone receiver is *shunted* around the detector, all of which is clearly shown in Fig. 4, when the instrument is ready to receive messages.

## The Aërial Switch

If you are going to send as well as to receive you will have to use an aërial switch, that is a specially made switch. When the lever of the switch is up the sending apparatus is cut out and the receiver is connected to the aërial and ground wires. But when the switch is down the receiver is disconnected and the sending apparatus is cut in.

## Operation of the Apparatus

**SENDING.** Suppose now that the aërial switch is in the *down* position and that you are sending a message. When you press down the button of the telegraph key it closes the battery, or lighting circuit, and the current flows through the primary coil of the induction coil, or transformer.

If it is a direct current the *vibrator* of the induction coil

changes it into an *interrupted current* and this sets up *high pressure* alternating currents in the *secondary* of the coil; or if it is an alternating current to begin with, then the transformer sets up high pressure alternating currents in the *secondary* coil.

In either case these high pressure alternating currents charge the condenser and this in turn discharges through the spark-gap and makes a continuous stream of bright, crackling sparks. Now the discharge of a condenser through the spark-gap sets up high tension currents of very high frequency, or *electric oscillations* as they are called, and these currents surge through the tuning coil, the *aërial*, and ground wires at the rate of a million times a second, more or less.

These electric oscillations running forth and back along the *aërial* wire are changed into *electric waves*, just as an ordinary electric current flowing in a wire is changed into magnetic lines of force, and these electric waves push out into space in every direction exactly as the vibrations of a bell send forth sound waves, but with this difference, where a sound wave will travel only a few miles at most, an electric wave will travel hundreds of miles, and, again, where a sound wave travels 1,086 feet a second, an electric wave travels 186,500 miles a second, which is the speed of light.

RECEIVING. Since electric waves from a sending *aërial* are radiated into space in every direction, they will, of course, strike any *aërial* wire wherever it may be located if it is not too far away.

And when the electric waves strike an *aërial* connected with a receiver they set up in the *aërial* wire electric oscillations having exactly the same number of vibrations per second as the electric oscillations which sent out the waves. For this reason the receiving circuits must be tuned to the sending circuits.

The high frequency oscillations set up in the *aërial* wires by the incoming electric waves will flow down the *aërial* to the tuning coil, thence through the condenser and the detector to the ground and back again and it is the purpose of the detector to act as a sort of valve to change the rapid oscillations into an interrupted direct current.

This latter kind of a current energizes the telephone receiver where the former kind of current will not affect it, with the result that buzzing sounds are made which are read by the operator, that is a short buzz is read as a *dot* and a long buzz as a *dash*, and in this way messages in the International Code are received.



As I mentioned in the beginning of this article wireless apparatus can be bought ready to set up of nearly all dealers in electrical supplies or if you want to make the apparatus for yourself get "The Book of Wireless" published by D. Appleton and Co., New York, which tells you all about it.

### Totems in Town

A totem is an emblem of a man, a group of men, or an idea. It has no reference to words or letters.

Before men knew how to write they needed marks to indicate ownership. This mark must be simple and legible and was chosen because of something connected with the owner or his family. Later some of the trades adopted a symbol; for instance the barbers in the early days were "blood letters" and were closely associated with the medical profession. Their totem indicated their business, and we have the red-and-white barber pole of to-day. It was among the Indians along the west coast of America that the science and art of totems reached its highest development, though they have a world-wide usage and go back in history to the earliest times.

Out of this use of totems as owner marks and signs grew the whole science of heraldry and national flags.

Thanks to the fusion of many small armies into one or two big armies, that is, of many tribes into a nation, and also to modern weapons which made it possible to kill a man farther off than you could see the totem on his shield, national flags have replaced the armorial devices, and are the principal totems used to-day.

But a new possibility has been discovered in modern times. Totems will serve the ends of commerce, and a great revival of their use is now seen.

The totem is visible such a long way off and is understood by all, whether or not they can read or know our language, is copyrightable and advertisable, so that most of the great railway companies, etc., now have totems.

There are not less than one hundred common totems used in our streets to-day. Among the familiar ones seen are the American eagle, with white head and tail, the Austrian eagle with two heads, the British lion, the Irish harp, the French fleur de lis, etc. Among trades the three balls of the pawnbroker, the golden fleece of the drygoods man, the mortar and pestle of the druggist, and others are well known. Examples of these and others are given in the illustration, but any wideawake Woodcraft Boy will be able to find many others by careful observation.



Christianity



Mourning



Electric  
Power



Beef  
Meat



Northern  
Pacific R. R.



Salt Lake  
R. R.



Santa  
Fe R. R.



Railroad



Bell  
Telephone



Pawnshop



Liberty



Army



Drink



Luck



Woodcraft



Navy



Power



Optician



Union Pacific  
R. R.



Islam



Flag



Union of  
Nations



New York  
City



Canadian  
Pacific  
R. R.



Candle



Canadian  
Pacific  
R. R.



Barber



Scotland

## Fire - Servant or Master?

**FIRE IS A GREAT SERVANT BUT A TERRIBLE MASTER**

### Fire Prevention

Condensed from Fire Commissioner Robert Adamson's Pamphlet

Why should America suffer five times as much fire loss per head as any European country? Chiefly because we are so careless.

I think that every year about 2,000 lives are lost in fires, 2,000 persons injured. The money loss to this country is \$500,000,000, which means that every family of five persons is paying \$12.50 a year for their share of this loss—\$2.50 apiece. In Europe the people are so careful about fires that fire loss is about fifty cents apiece. Taking no account of the suffering and injury, our cash fire loss in America is \$600,000 a day, \$1,000 an hour, \$416 a minute. In other words, we lose each year through fire more than enough to build the Panama Canal.

During 1913, in New York City alone, 588 fires were caused by children playing with matches, with a loss of \$32,000.

It has been calculated that more people have been killed in recent years on the Fourth of July celebration than were killed in the whole origin of the revolution that it celebrates. Nearly 40,000 were killed on the Fourth of July fires in the ten years, 1904 to 1914. Why sensible people have risen up and demanded a safe and sane Fourth.

Fireworks and bonfires should be absolutely forbidden. I never yet saw the time or place where a bonfire was not a curse. However safe it may seem, there is sure to be some risk, and it is wasting valuable wood. A true Woodcraft Boy or Girl never makes a bonfire. Let us express our patriotism without ruining our neighbors' property or our own.

Fires would be practically unknown if we followed the advice of Commissioner Adamson of New York City, and practised the

### TWENTY-THREE DON'TS

- Don't allow children to play with matches.
- Don't block the fire escapes.
- Don't fail to inspect your own home, or the place where you work, so as to know where all exits are.
- Don't throw away lighted matches, cigars, or cigarettes.
- Don't go into dark closets, bedrooms, or cellars, with lighted candles or matches.

Don't use kerosene to light fires with, or use benzine or naphtha near open flames.

Don't fill kerosene lamps when lighted.

Don't use a poor quality of kerosene oil.

Don't put ashes in wooden boxes or barrels. Keep ashes away from boards.

Don't put hot ashes on dumbwaiter, or near wooden partitions.

Don't have piles of rubbish in the house, or cellars, or in workshops.

Don't use candles on Christmas trees.

Don't keep matches in anything but a closed metal box.

Don't tie back the dumbwaiter shaft in the cellar.

Don't store oils, paints, grease, or fats in the house.

Don't have greasy rags around, they catch fire by themselves.

Don't have lace curtains near gas brackets.

Don't use folding gas brackets.

Don't use gasoline, naphtha, or benzine in the house unless all windows are open and there is no light near.

Don't pour gasoline or naphtha down the drain.

Don't use kitchen stoves close on tables unless there is a metal sheet underneath the burners.

Don't set gas stoves right up against the wall. They should have a metal sheet behind them.

Don't look for gas leaks with a lighted match or candle.

#### IN CASE OF FIRE

But suppose that in spite of your doing your share some one else has failed, and a fire has broken out in a house. The first thing is *keep cool, act quickly, and send in an alarm.*

*How.* Find the nearest alarm box to your home. If it opens with a key, find out who keeps the key. The ordinary box has no key; you simply turn the handle to the right, open the door, and pull the hook down all the way and let go. Wait until the firemen arrive and direct them to the fire. If you don't know where the nearest alarm box is located, use the 'phone and ask Central for Fire Headquarters, and tell the Fire Department operator the exact address of the building where fire is.

*If the fire is in a crowded building,* the first thing is to *keep cool* and help others to do the same, for *PANIC* is worse than *Fire*. It kills far more. Keep cool and help others do the same. A cool man who can get up and address the crowd from the step can often do wonders, for though they cannot hear him the crowd can see that he is cool. This helps them.

## IN A BURNING HOUSE

Remember that in a house afire there is always good air near the floor, so crawl with head low if the room is full of smoke. If you must open a window, close the door first. Then get out and wave anything you can get, shout and wait. Some fireman will be sure to see and save you if you keep cool. Remember these men are absolutely brave, sure, and quick, they know their business; they are there to help you. The fire that is so serious to you is an everyday thing to them. I might almost say *they never fail*, unless the victim does not keep cool. We may make jokes about our street cleaners, and write harsh things at times about the police and the alderman, but we are *always proud of our firemen*, and whatever they tell you to do is sure to be the best thing possible at the time.

If your clothing is on fire, roll in any woolen blanket, rug, or coat you can find.

If you find an insensible person in a room full of smoke, get him on the floor, tie his hands together loosely with a towel or suspenders; if you have no cord, throw the end of his coat over his face around your neck, and he is on the floor below you; then crawl out on all fours, straddling him as you drag him.

If some one is cut off, up aloft, so he must jump, let half a dozen men hold a canvas blanket or other strong cloth for him to jump on. Hold it as high as you can with its centre about twelve feet from the base of the wall, and he can jump safely from a great height. Of course, you can help him to hit it by moving it to fit his jump after he is started.

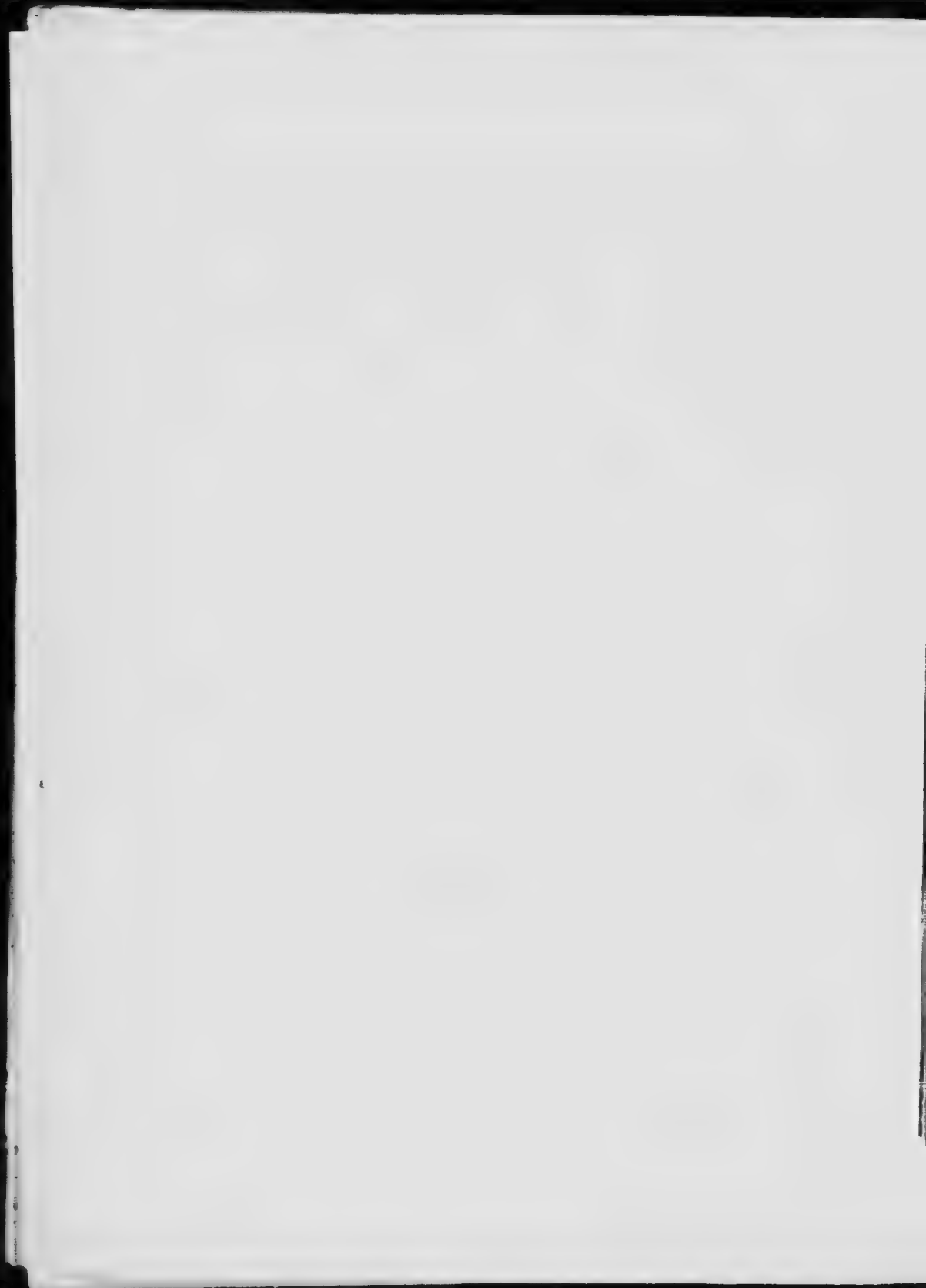
Keep all doors and windows closed as much as possible to cut off the draft.

*But always see that the alarm has gone in.*

## Sleep Outdoors

As you drive through New England in the evening, summer, or winter, you must notice a great many beds out of doors, on piazza or on sun-deck. Many of these are beds of persons who are suffering from lung trouble. They have found out that this is the way to cure it. Some of them are the beds of persons who fear lung trouble and this they know is the way to evade it.

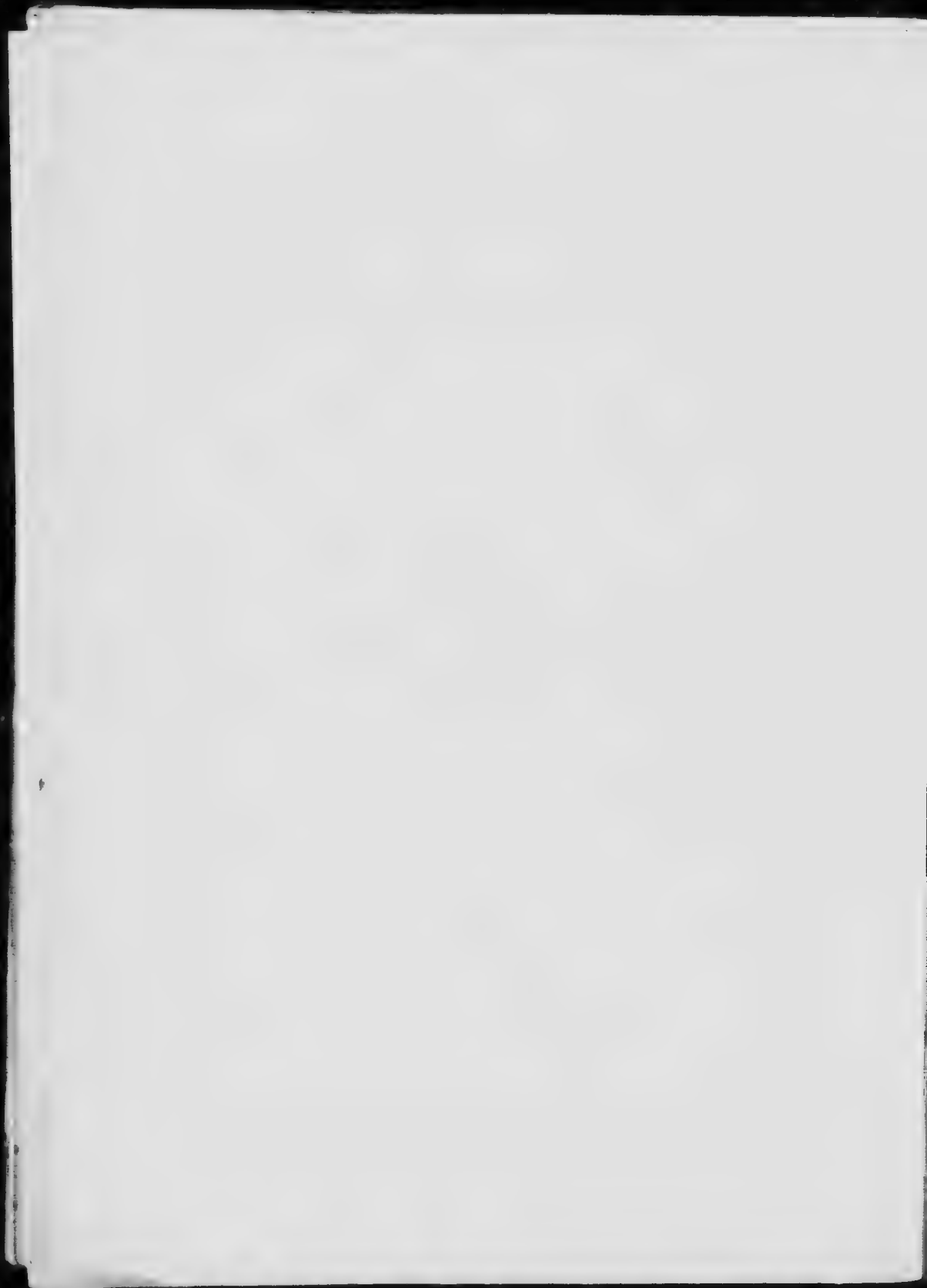
Take, then, this lesson: If possible, every boy should *sleep out of doors* as much as possible; *not on the ground*, and not in the wind, but in a bed, warm, dry, and rainproof, and he will be the better for it.



## HEALTH

Health Hints  
The Life Force  
Breathing  
Walking  
Near-sightedness—Remedy  
Dry Footgear  
Ready Help  
Revive from Drowning  
Sunstroke

Burns and Scalds  
Hemorrhage  
Cuts and Wounds  
Lightning  
Shock—Nervous Collapse  
Fainting  
Mad Dog—Snake Bite  
Insect Stings  
Cinders in Eye





## HEALTH

### Health Hints

The law of the Woodcraft Boys is "understand and respect your body—it is the temple of the spirit." Most of the joy in living comes from a healthy body, every part of which is in perfect order and running smoothly. Health means activity. Only a body which has been used and tried will radiate vitality. There was a time when the body was spoken of as a thing to be ashamed of, as something to hinder one from achieving the worthwhile things. In those days men spoke of spiritual things and worldly things, thinking they were distinct and separate—forgetting that the things of the spirit work themselves out through the body. The most beautiful thing in the world is the human body and the most wonderful. Cherished with this idea the muscles become beautiful and strong, the skin clean and firm. Such a body is fit to meet the struggles of life and has a reserve force to meet the call of emergency. Most of us start with a good body and it is our sacred duty to keep it so. Here are a few rules for you to follow:

1. Carry yourself well. Throw your shoulders back. Expand your chest. Don't slouch.
2. Breathe deeply. Practise proper breathing. Have as large a chest expansion as possible.
3. Learn to sleep properly. Get at least eight hours and if possible nine. Have plenty of fresh air in your room.
4. Accustom your body to the air. Make sure your muscles of the back and stomach are in the best of condition. Use the wet and dry rub down frequently—every day. Accustom your body to firmness, avoid any tendency toward softness.
5. Eat simple food—avoid stimulants. Check any habits of drinking soft stuff, over-eating candy. Stop when you have eaten enough.
6. Above all be clean. Bathe frequently and carefully. See that all parts of the body are cleansed thoroughly and regularly.

### The Life Force

By Dr. Valeria Parker

The greatest force in the Universe is known as the Life Force. Although common to every living thing, it has never been understood by philosophers nor has it been created by scientists. We know, however, that in whatever form it manifests itself, the Life Force has three powers—growth, assimilation, and continuation of its own life through new lives. This last is the great power by which our world, with its many forms of plant and animal life, is renewed, throughout the ages. We call this power reproduction. In plants and animals, reproduction takes place through definite laws and at definite seasons, controlled by the force we call Nature. In human beings, reproduction, or parenthood, is governed by mind and spirit, but if uncontrolled, instead of being a force of life and happiness, it becomes a means of degradation of body, mind, and spirit, leading to destruction.

Because of the great importance of the Life Force in human beings, reproductive power is not fully received until about the fourteenth year. During and after this time, special facts should be known and understood in order that the body may receive proper care and that character and self-control may be developed. Therefore, now that you have passed the years of childhood and since you are responsible for the care of your own body and the development of your own character you should know the special laws governing human life.

When it is understood, revered, and guided in the right direction, the Life Force, when not concerned in parenthood, is used in strengthening the body and the mind. As this great force becomes a part of your life and is given into your keeping, it becomes your privilege to know the facts concerning it for the development of bodily strength and moral character. Some of this information you may get from books concerning which your Guide will advise you. From older persons whom you respect you may learn important truths. Never should you seek facts from those who by word or action show that they would treat lightly or even degrade the Power of Life. After you begin to understand the true meaning of manhood, you will resolve that you will hold your share in the "Life of the Ages" as a sacred trust to be used in service to others as well as the development of your own best self.

## Breathing

"Shut Your Mouth and Save Your Life" was the title of an essay by George Catlin, a famous outdoor man, who lived among the Indians, and wrote about them 1825 to '40. In this he pointed out that it is exceedingly injurious to breathe through your mouth; that, indeed, many persons injured their lungs by taking in air that was not strained and warmed first through the nose, and in many cases laid the foundation of diseases which killed them.

## Don't Turn Out Your Toes Too Much

When you see a man whose toes are excessively turned out, you may know he was born and brought up on sidewalks. He is a poor walker and will not hold out on an all-day tramp.

The mountaineer and the Indian scout always keep their feet nearly straight. It is easier on the feet, it avoids corns and bunions, and it lengthens the stride; makes, in short, a better traveller. A glance at his tracks will tell you how a person walks.

## The Keen Eyes of the Indian. Do You Wish to Have Them?

*Near-sightedness.* An eminent eye doctor, Dr. W. H. Bates of New York, has found out how you can have sight as keen and eyes as good as those of the Indians who live out of doors. After eight years' study of the subject he has established the following:

a. The defect known as near-sight or short-sight seldom exists at birth, but is acquired.

b. Besides being acquirable, it is preventable and in some cases curable.

c. It comes through continual use of the eye for near objects only, during the years of growth.

*The Remedy.* The remedy is, give the eye regular muscular exercise every day for *far-sight* by focussing it for a few minutes on distant objects. It is not enough to merely look at the far-off landscapes. The eye must be definitely focussed on something, like print, before the necessary muscular adjustment is perfect and the effect obtained.

The simplest way to do this is—get an ordinary eye testing card, such as is sold for a nickel at any optician's. Hang it up

as far off as possible in the schoolroom and use it each day. Train your eyes to read the smallest letters from your seat.

By such exercises during the years of growth almost all short-sight, or near-sight, and much blurred sight or astigmatism, may be permanently prevented.

An interesting proof is found by Dr. Casey Wood in the fact that while wild animals have good sight, caged animals that have lost all opportunities for watching distant objects are generally myopic or short-sighted. In other words, nature adapts the tool to its job.

### Dry Footgear

A certain minister knowing I had much platform experience said to me once: "How is it that your voice never grows husky in speaking? No matter how well I may be my voice often turns husky in the pulpit."

He was a thin, nervous man, very serious about his work and anxious to impress. I replied: "You are nervous before preaching, which makes your feet sweat. Your socks are wet when you are in the pulpit, and the sympathy between soles and voice is well known. Put on dry socks just before entering the pulpit and you need not fear any huskiness."

He looked amazed and said: "You certainly have sized me up all right. I'll try next Sunday."

I have not seen him since and don't know the result, but I know that the principle is sound—wet feet, husky throat.

### READY HELP

#### To Revive from Drowning

(1) As soon as the patient is in a safe place, loosen the clothing, if any.

(2) Empty the lungs of water, by laying the body breast down, and lifting it by the middle, with the head hanging down. Hold thus for a few seconds, till the water is evidently out.

(3) Turn the patient on his breast, face downward.

(4) Give artificial respiration thus: by pressing the lower ribs down and forward toward the head, then release. Repeat about twelve times to the minute.

(5) Apply warmth and friction to extremities, rubbing toward the heart.

(6) DON'T GIVE UP! Persons have been saved after

hours of steady effort, and after being under water over twenty minutes.

(7) When natural breathing is reestablished, put the patient into warm bed, with hot-water bottles, warm drinks, or stimulants, in teaspoonfuls, fresh air, and quiet. Let him sleep, and all will be well.

## Sunstroke

(1) Reduce the temperature of the patient and the place—that is, move the patient at once to a cooler spot, if possible, in the shade.

(2) Loosen or remove the clothing about the neck and body.

(3) Apply cold water or ice to the head and body, or even wrap the patient in sheets wet from time to time with cold water.

(4) Use no stimulant, but allow free use of cold water to drink.

## Burns and Scalds

Exclude the air by covering the burn with a thin paste of baking-soda, starch, flour, vaseline, olive oil, linseed oil, castor-oil, lard, cream, or cold cream. Cover the burn first with the smear; next with a soft rag soaked in the smear.

Shock always accompanies severe burns, and must be treated.

## Hemorrhage, or Internal Bleeding

This is usually from the lungs or stomach. If from the lungs, the blood is bright-red and frothy, and is coughed up; if from the stomach, it is dark, and is vomited. Cause the patient to lie down, with head lower than body. Small pieces of ice should be swallowed, and ice-bags, or snow, cold water, etc., applied to the place whence the hemorrhage comes. Hot applications may be applied to the extremities, but avoid stimulants, unless the patient is very weak.

## Cuts and Wounds

After making sure that no dirt or foreign substance is in the wound, the first thing is tight bandaging—to close it and stop the bleeding. The more the part is raised above the heart—the force-pump—the easier it is to do this.

If the blood comes out in spurts, it means an artery has been cut; for this, apply a twister or tourniquet—that is, make a big

knot in a handkerchief, tie it round the limb, with the knot just above the wound, and twist it round with a stick till the flow is stopped.

### Lightning

To revive one stunned by a thunderbolt, dash cold water over him.

### Shock or Nervous Collapse

A person suffering from shock has pale, dull face, cold skin, feeble breathing, rapid, feeble pulse, listless, half-dead manner. Place him on his back with head low. Give stimulants, such as hot tea or coffee, or perhaps one drink of spirits. Never remove the clothing, but cover the person up. Rub the limbs and place hot-water bottles around the body. Most persons recover in time, without aid, but those with weak hearts need help.

### Fainting

Fainting is caused by the arrest of the blood supply to the brain, and is cured by getting the heart to correct the lack. To aid in this have the person lie down with the head lower than the body. Loosen the clothing. Give fresh air. Rub the limbs. Use smelling-salts. Do not let him get up until fully recovered.

### Mad Dog or Snake Bite

Put a tight cord or bandage around the limb between the wound and the heart. Suck the wound many times and wash it with hot water to make it bleed. Burn it with strong ammonia or caustic or a white-hot iron; or cut out the wounded parts with a sharp knife or razor, if you cannot get to a doctor.

### Insect Stings

Wash with oil or weak ammonia, or very salt water, or paint with iodine.

### Cinders or Sand in the Eye

Can be removed with the corner of a handkerchief, or the wet end of a tiny roll of soft paper.

## Books Recommended

"FIRST AID," by Major Charles Lynch. P. Blakiston Sons & Co., 1017 Walnut St., Philadelphia, 1911. 30 cent.

## PATRIOTISM AND CITIZENSHIP

Patriotism and religion are the finest expressions in the life of man. His first impulse in life is for self-protection, his second to protect his family, and his third to protect his land and nation. Patriotism is a love of nation which begins in self-control and family love. It compels one to forget self and do the best thing for the nation. The waving of flags, the singing of hymns, the great celebrations indicate its existence. But it appears in its finest form in citizenship, when men and women strive to see that righteousness and justice are done. It means careful study of the conditions of life existing in the nation and having thoughtful and positive opinions as to how these conditions may be bettered. It means casting a vote at every opportunity for the best man and the best cause. More than this, it means doing always what you conceive to be right and insistence that the affairs of the community be conducted on this same principle. It means the greatest good to the greatest number. It means libraries, night schools, and playgrounds, and looks after garbage disposal, hospitals, and health laws. It means the elimination of corruption in every form, whether in government, in society, or private life—it means in public life the conscience of the individual.

While patriotism and citizenship are the same to young and old, they mean one thing to a young person and more to a grown-up. To the older person they entail the serious matter of voting, of holding office, of cooperating with others in achieving good government.

To the Woodcraft Boy it means duty well done in home, in school, on the playground and street, in his relations with his friends and acquaintances. It means taking seriously the club, the class, the Woodcraft Tribe—any organization to which he belongs. These things are vital, and only one who lives wisely and well as a young person will be able to do his best in maturity. Guided by these principles, a Woodcrafter, young or old, votes for the best and does not decide the issue on friendship or selfish interest. The Woodcrafter grown up always votes for the best fitted, never takes office because it is an honor merely, but considers it a sacred duty. The Woodcrafter in school, club, Tribe, or other group recognizes his responsibility to see that right is

done—he is conscious that the greatest need of his time is that of strong men and women who will want the best and see that it is obtained.

This is patriotism and citizenship—that you know your homeland as well as you can, that you love it so well that you give to it your best, that your homeland may be a place of right thinking and right living to all, rich and poor, young and old, strong and weak.

### Books Recommended

#### Speeches, Poems, and Recitations

ARBOR DAY, Robt. Haven Schauffler.	Moffat, Yard & Co.	\$1.00
CHRISTMAS, Robt. Haven Schauffler.	Moffat, Yard & Co.	\$1.00
FLAG DAY, Robt. Haven Schauffler.	Moffat, Yard & Co.	\$1.00
INDEPENDENCE DAY, Robt. Haven Schauffler.	Moffat, Yard & Co.	\$1.00
LINCOLN'S BIRTHDAY, Robt. Haven Schauffler.	Moffat, Yard & Co.	\$1.00
MEMORIAL DAY, Robt. Haven Schauffler.	Moffat, Yard & Co.	\$1.00

### Hiking

It is a good rule in hiking to set out with the idea of keeping the party together, having a pleasant time, and seeing interesting things, rather than of showing how hardy you are. It is as bad as trying to show how smart you are. Do not try to make a record. Record breakers generally come to grief in the end. Take a few boys, not more than a dozen, and set out determined to be moderate. Plan a moderate trip of which not more than half the time must be consumed in going and coming.

For example, if it is Saturday afternoon and you must be home by six o'clock, having thus four hours, divide the time into two hours' travel, going and coming, and two hours' exploration or sight-seeing. Three miles is a moderate walk for one hour, so that should be the limit of distance that ordinarily you tramp from your starting point. At five o'clock all hands should be ready to face homeward.

In a large city it may be that the hike will be taken to a park, to a museum, or to a place or point of historical interest. In this connection it might be well for some member of the tribe to make a list of the interesting historical places, of the museums of various kinds, of interesting buildings, including any manufacturing plants; and have this list ready when it is decided to take a hike.

The following are some of the rules which have been found good in hiking:

Do not go in new shoes.



Make sure that your feet are comfortable. (A comfortable shoe is not too tight nor too loose.)

See that your stockings are without holes and ordinarily without large darns. (When going on a long hike it is well to take an extra pair of stockings with you.)

In walking keep your toes practically straight ahead of you.

Walking with your feet turned out is tiring and results in foot trouble.

Try to have the members of the group of similar age and physical ability.

If going in the country it is well to take a tape line, knife, some string, and some matches.

A compass and a pocket level and a map also are of value in many cases.

A notebook and pencil are of great value.

Remember that the value of the hike is in doing things which you cannot do at home, and last and most important it is wise to set out with a definite object. Here are some of the objects for a short hike:

To determine that hard maple or any other timber does or does not grow in such woods or such a park.

To see how many kinds of trees can be discovered in a given place, or how many kinds of wild flowers.

To practise the building of fires of wildwood material.

To have a practical demonstration in cooking.

To get acquainted with the birds.

To learn the geological formation of a certain rock or ledge.

To get 100 straight rods 30 inches long; to make an Indian bed of willow, hazel, red willow (chinkinik) arrow-wood, etc.

To get wood for rubbing sticks or the fire-bow.

To get horns for a Caribou dance.

If there is snow, to take, by the tracks, a census of a given woods, making full size drawings of each track—that is four tracks, one for each foot, and also give the distance to the next set.

Most important of all, remember that though it is wise to start with an object, it is still wiser to change whenever some much more alluring pursuit or opportunity turns up. Any one who sticks to a plan merely because he started that way, when it turns out to be far from the best, is not only unwise—he is stupid and obstinate.

Make sure that as you travel to the point you have selected that your eyes and ears are open to see the hundreds of interesting things that may be seen along the roadside.

## Books Recommended

BOYS' BOOK OF HIKING, Edward Cave. Published by Doubleday, Page & Co. Price .50 cents

## Sign Language

From the "Book of Woodcraft," by permission of Ernest Thompson Seton. Doubleday, Page & Co. Price, \$1.75

Do you know the Sign Language?

If not, do you realize that the Sign Language is an established mode of communication in all parts of the world without regard to native speech?

Do you know that it is so refined and complete that sermons and lectures are given in it every day, to those who cannot hear?

Do you know that it is as old as the hills and is largely used in all public schools? And yet when I ask boys and girls this question, "Do you use the Sign Language?" they nearly always say "No."

Why should you talk the Sign Language? There are many reasons:

In this code you can talk to any other Woodcrafter without an outsider knowing or understanding.

It makes conversation easy in places when you must not speak aloud, as in school, during music, or by the bedside of the sick.

It is a means of far-signalling much quicker than semaphore or other *spelling* codes, for this gives one or more words in one sign.

It will enable you to talk when there is too much noise to be heard, as across the noisy streets.

It makes it possible to talk to a deaf person.

It is a wonderful developer of observation.

It is a simple means of talking to an Indian or a Woodcrafter of another nationality whose language you do not understand. This indeed is its great merit. It is *universal*. It deals not with words but with ideas that are common to all mankind. It is therefore a kind of Esperanto already established.

So much for its advantages; what are its weaknesses? Let us frankly face them:

It is useless in the dark;

It will not serve on the telephone;

It can scarcely be written;

In its pure form it will not give new proper names.

To meet the last two we have expedients, as will be seen, but the first two are insurmountable difficulties.

Remember, then, you are to learn the Sign Language because it is *silent, far-reaching*, and the one *universal language*.

Since it deals fundamentally with ideas, we avoid words and letters, but for proper names it is very necessary to know the one-hand manual alphabet.

Here are some of the better known. Each boy will probably find that he has known and used them all his schooldays:

*You* (pointing at the person);

*Me* (tapping one's chest);

*My, mine, yours, possession, etc.* Hold out the closed fist, thumb up, and swing it down a little so thumb points forward.

*Yes* (nod). When far off, make your right hand, with all fingers closed except index and thumb which are straight and touching at top, advance, bend toward the left side as though bowing, then returned and straight again.

*No* (head shake). When too far for that to be seen, hold the closed right hand in front of the body, then sweep it, outward and downward, at the same time turn the palm up as though throwing something away.

*Eat* (throw the flat hand several times past the mouth in a curve);

*Drink* (hold the right hand as though holding a cup near the mouth and tip it up);

*Sleep* (lay the right cheek on the right flat hand);

*Look* (flat hand over eyes);

*Look there* (point and look in same direction);

*Touch* (reach out and touch with index);

*Listen* (flat hand behind ear);

*Whisper* (silently move lips, holding flat hand at one side of mouth);

*Silence or hush* (toefinger across lips);

*I will not listen* (hold flat hands on ears);

*I will not look* (cover eyes with hands);

*Taste* (lay finger on lip);

*Smell* (hold palm to nose);

*That tastes good* (smack the lips);

*The food was good* (pat the stomach);

*Bad taste* (grimace and spitting out);

*Bad smell* (hold the nose);

Thus "*Will you eat?*" would be a *Question*, *you eat*, but *Have you eaten?* would be, *Question*, *you eat, finished*.

*Drinking* (lift right hand to mouth as though it held a glass);

*Smoking* (make as though holding a pipe and drawing);

*Paint* (use flat right as a brush to paint flat left);

*Shave* (use finger or thumb on face as a razor);

*Wash* (revolve hands on each other as in washing);

*Bend* (with right hand bend left index);

*Break* (with fists touching, make as though to bend a stick, then swing the fists apart);

*Write* (make the action with index);

*Strike* (strike down with fist);

*Fighting* (make the fists menace each other);

*Set it afire* (sign match, and then thrust it forward);

*Drive horses* (work the two fists, side by side);

*Finished or done* (hold out the flat left hand palm to the right, then with flat right hand and chop down past the ends of the left fingers);

*Search me* (hold the coat flaps open in each hand);

*Swim* (strike out with flat hands);

*Dive* (flat hands together moved in a curve forward and down);

*Will you come swimming?* (first and second fingers raised and spread, others closed);

*Good* (nod and clap hands);

*Bad* (shake head and grimace);

"*Very*" or "*very much*," is made by striking the right fist down past the knuckles of the left without quite touching them, the left being held still;

*Hot* (wet middle finger in mouth, reach it forward and jerk it back);

*Cold* (fists near shoulder and shaken);

*Good-bye* (hand high, flat, palm down, fingers wagged all together);

*Thank you* (a slight bow, smile and hand-salute, made by drawing flat hand a few inches forward and downward palm up);

*Surrender* (both hands raised high and flat to show no weapons);

*I am thinking it over* (forefinger on right brow and eyes raised);

*I forgot* (touch forehead with all right finger tips, then draw flat hand past eyes once and shake head);

*I wind him around my finger* (make action with right thumb and index around left index);

*I have him under my thumb* (press firmly down with top of right thumb);

*Sleepy* (put a fist in each eye);

*Bellyache* (with hands clasped across the belly);

*Sick* (a grimace and a limp dropping of hands);

*Go* (move hand forward, palm first);

*Come* (draw hand toward one's self, palm in);

*Hurry* (same, but the hand quickly and energetically moved several times);

*Come for a moment* (hand held out back down, fingers closed except first, which is hooked and straightened quickly several times);

*Stop* (flat hand held up; palm forward);

*Gently or Go easy* (like "stop," but hand gently waved from side to side);

*Get up* (raise flat hand sharply, palm upward);

*Sit down* (drop flat hand sharply, palm down);

*Rub it out* (quickly shake flat hand from side to side, palm forward);

*Up* (forefinger pointed and moved upward);

*Down* (ditto downward);

*Way or road* (hold both flat hands nearly side by side, palms up, but right one nearer the breast, then alternately lift them forward and draw them back to indicate track or feet travelling);

*Forward* (swing index forward and down in a curve);

*Backward* (jerk left hand over shoulder);

*Across* (hold left hand out flat, palm down, run right index across it);

*Over and above* (hold out flat left, palm down, and above it hold ditto right);

*Under* (reverse or foregoing);

*It's in my pocket* (slap pocket with flat hand);

*I send you a kiss* (kiss finger tips and move hand in graceful sweep toward person);

*I pray* (clasped hands held up);

*I am afraid, or surrender* (hold up both flat hands palm forward);

*I forget* (slowly shake head, and brush away something in air, near the nose);

*I am seeking* (looking about and pointing finger in same directions);

*I have my doubts* (slowly swing head from side to side);

*You surprise me* (flat hand on open mouth);

*Connivance* (winking one eye);

*Puzzled* (scratch the head);

*Crazy* (tap forehead with index then describe a circle with it);

*Despair* (pulling the hair);

*Weeping* (with index finger at each eye, trace course of tears);

*Friendship* (hands clasped);

*Threatening* (fist shaken at person);

*Warning* (forefinger gently shaken at a slight angle toward person);

*Scorn* (turning away and throwing an imaginary handful of sand toward person);

*Insolent defiance* (thumb to nose tips, fingers fully spread);

*Indifference* (a shoulder shrug);

*Ignorance* (a shrug and head-snake combined);

*Arrogant* (indicate swelled head);

*Pompous* (indicate a big chest);

*Incredulity* (expose white of eye with finger, as though proving no green there);

*Shame on you* (right forefinger drawn across left toward person several times);

*You make me ashamed* (cover eyes and face with hands);

*Mockery* (stick tongue at person);

*Disdain* (snap fingers toward person);

*Applause* (silently make as though clapping hands);

*Victory* (one hand high above head as though waving hat);

*He is cross* (forefinger crossed level);

*Fool or ass* (a thumb in each ear, flat hands up);

*Cutthroat* (draw index across throat);

*I am no fool* (tap one side of the nose);

*Joke* (rub side of nose with index);

*Upon my honor* (with forefingers make a cross over heart);

*I beg of you* (flat hands tight together and upright);

*Do you think me simple?* (forefinger laid on side of nose);

*Will you? or, is it so?* (eyebrows raised and slight bow made);

*Bar up, fins, or I claim exemption* (cross second finger of right hand on first finger and hold hand up);

*Poverty* (both hands turned flat forward near trouser pockets);

*Bribe* (hand held hollow up behind the back);

*Give me* (hold out open flat hand pulling it back a little to finish);

*I give you* (the same, but push forward to finish);

*Pay* (hand held out half open, forefinger and thumb rubbed together);

*Give me my bill* (same, then make motion of writing);

*Church* (hands clasped, fingers in, but index fingers up and touching);

*Revolver* (hold out right fist with index extended and thumb up);

*Gun or shooting* (hold hands as in aiming a gun);

*Match* (make the sign of striking a match on the thigh);

*Jew* (flat hands waved near shoulders palm up);

*Knife* (first and second fingers of right hand used as to whittle first finger of left);

*House*. Hold the flat hands together like a roof.

*Pistol* (making barrel with left hand, stock and hammer with right, snap right index on thumb);

*Query*. The sign for *Question*—that is, "I am asking you a question," "I want to know"—is much used and important. Hold up the right hand toward the person, palm forward, fingers open, slightly curved and spread. Wave the hand gently by wrist action from side to side. It is used before, and sometimes after, all questions. If you are very near, merely raise the eyebrows.



Query Sign

The following are needed in asking questions:

*How Many?* First the *Question* sign, then hold the left hand open, curved, palm up, fingers spread, then with right digit quickly tap each finger of left in succession, closing it back toward the left palm, beginning with the little finger.

*How Much?* Same as *How many?*

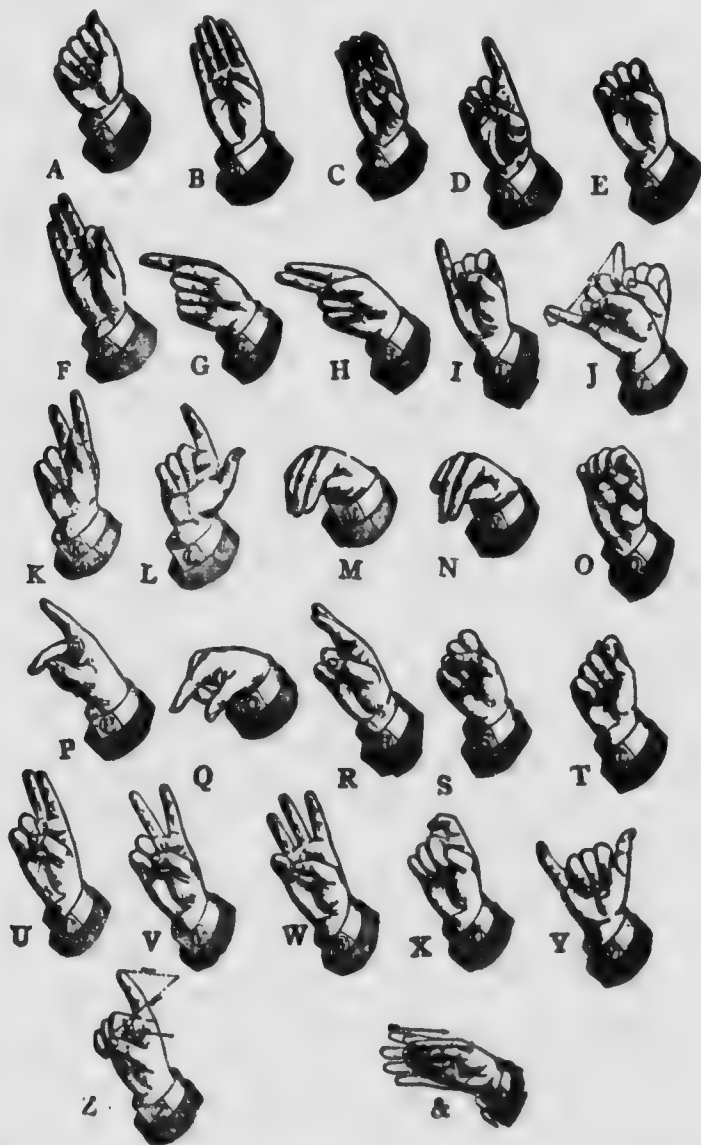
*What?* What are you doing? What do you want? What is it? First give *Question*, then hold right hand palm down, fingers slightly bent and separated, and, pointing forward, throw it about a foot from right to left several times, describing an arc upward.

*When?* If seeking a definite answer as to length of time, make signs for *Question*, *How much*, and then specify time by sign for hours, days, etc. When asking in general "*When*" for a date, hold the left index extended and vertical, others and thumb closed, make a circle round left index tip with tip of extended right index, others and thumb closed; and when the index reaches the starting point, stop it, and point at tip of left index (what point of shadow?).

*Where?* (What direction?) *Question*, then with forefinger sweep the horizon in a succession of bounds, a slight pause at the bottom of each.

*Which?* *Question*, then hold left hand in front of you with

palm toward you, fingers to right and held apart; place the end of the right forefinger on that of left forefinger, and then draw it down across the other fingers.



*Why?* Make the sign for *Question*, but do it very slowly.  
*Who?* *Question*, and then describe with the right forefinger  
 a small circle six inches in front of the mouth.



It takes a good-sized dictionary to give all the signs in use, and a dictionary you must have, if you would become an expert.

A very pretty Woodcraft sign is given as follows: First, give the *Question* sign, then make an incomplete ring of your right forefinger and thumb, raise them in a sweep until above your head, then bring the ring straight down to your heart. This is the Indian way of asking, "Is the sun shining in your heart?"—that is, "Are you happy?"—your answer will be made by the right hand and arm standing up straight, then bowing toward the left, followed by a sharp stroke of the right fist knuckles past those of the left fist without their touching, which means: "Yes, the sun shines in my heart *heap strong*."

### Picture-writing

The written form of Sign Language is the picture-writing also called Pictography and Ideography, because it represents *ideas* and not words or letters. It is widely believed that Sign Language is the oldest of all languages; that indeed it existed among animals before man appeared on earth. It is universally accepted that the ideography is the oldest of all writing. The Chinese writing for instance is merely picture-writing done with as few lines as possible.

Thus, their curious character for "*Hearing*" was once a complete picture of a person listening behind a screen, but in time it was reduced by hasty hands to a few scratches; and "*War*," now a few spider marks, was originally a sketch of "two women in one house."

To come a little nearer home, our alphabet is said to be descended from hieroglyphic ideographs.

"A" or "Ah," for example, was the sound of an ox represented first by an outline of an ox, then of the head, which in various modifications, through rapid writing, became our "A."

"O" was a face saying "Oh," now simplified into the round shape of the mouth.

### SOME INDIAN SCOUT PICTOGRAPHS



"S" was a serpent hissing. It is but little changed to-day.

We may also record our Sign Language in picture-writing, as was the custom of many Indian tribes, and we shall find it worth while for several reasons: It is the Indian special writing; it is picturesque and useful for decoration; and it can be read by any Indian no matter what language he speaks. Indeed, I think it probable that a pictograph inscription dug up 10,000 years from now would be read, whether our language was



understood or not. When the French Government set up the Obelisk of Luxor in Paris and wished to inscribe it for all time, they made the record, not in French or Latin, but in pictographs.

It is, moreover, part of my method to take the child through the stages of our race development, just as the young bird must run for a send-off, before it flies, so pictography being its earliest form is the natural first step to writing.

In general, picture-writing aims to give on paper the idea of the Sign Language without first turning it into sounds. In the dictionary of Sign Language is given the written form after each of the signs that has a well-established or possible symbol. Many of these are drawn from the Indians who were among the best scouts and above noted for their use of the picture-writing. A few of them will serve to illustrate.



Numbers were originally fingers held up, and five was the whole hand, while ten was a double hand. We can see traces of this origin in the Roman style of numeration.

A one-night camp, a more permanent camp, a village and a town are shown in legible symbols.





An enemy, sometimes expressed as a "snake," recalls our own "snake in the grass." A "friend" was a man with a branch of a tree; because this was commonly used as a flag of truce and

	Man		Good
	Woman		Bad
	Baby		Water
	Scout		Good water
	Scouting		Good water in 3 arrow flights
	Question		One-night camp
	Yes		More permanent camp
	No		Village
	Doubtful		Town
	Peace		Heap or many
	War		I have found
	Surrender		Bear
	Prisoner		Grizzly bear
	Enemy		Chipmunk
	Friend		Dead bear
			Treaty of peace

had indeed the same meaning as our olive branch. The tree is easily read; it was a pair of figures like this done in Wampum that recorded Penn's Treaty.

"Good" is sometimes given as a circle full of lines all straight and level, and for "bad" they are crooked and contrary. The wavy lines stood for *water*, so *good water* is clearly indicated.

	Level		Snow Moon or January
	Direction forward		Hunger Moon or February
	Direction backward		March the Wakening or Crow Moon
	Sun or day		Grass Moon or April
	Sunrise		Planting Moon or May
	Sunset		Rose Moon or June
	Noon		Thunder Moon or July
	Night		Red Moon or Green Corn August
	Day back one, or yesterday		Hunting Moon September
	Day forward one, or to-morrow		Leaf - Falling Moon October
	Moon, or month		Mad Moon November
	Rain		Long Night Moon December
	Snow		
	Year (or snow round to snow)		

The three arrows added mean that at three arrows' flight in that direction, that is a quarter mile, there is good water. If there was but one arrow and it pointed straight down that meant "good water here," if it pointed down and outward it meant "good water at a little distance." If the arrow was raised to carry far, it meant "good water a long way off there." This sign was of the greatest value in the dry country of the South-

west. Most Indian lodges were decorated with pictographs depicting in some cases the owner's adventures, at other times his prayers for good luck or happy dreams.

The old Indian sign for peace, three angles all pointing one way that is "agreed," contrasts naturally with the "war" or "trouble" sign, in which they are going different ways or against each other.

An animal was represented by a crude sketch in which its chief character was shown, thus chipmunk was a small animal with long tail and stripes. Bear was an outline bear, but grizzly bear had the claws greatly exaggerated.

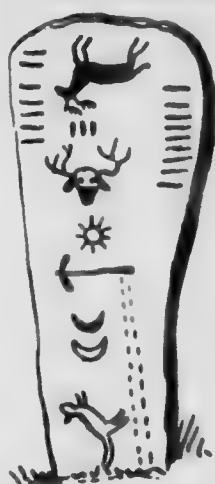
When the animal was killed, it was represented on its back with legs up.

Each chief, warrior, and scout had a totem, a drawing of which stood for his name or for himself.



A man's name is expressed by his totem; thus, the above means, To-day, 20th Sun Thunder Moon. After three days "Deerfoot," Chief of the Flying Eagles, comes to our Standing Rock Camp.

When a man was dead officially or actually, his totem was turned bottom up.



Here is a copy of the inscription found by Schoolcraft on the grave post of Wabojee, or White Fisher, a famous Ojibway chief. He was of the Caribou clan. On the top is his clan totem reversed, and on the bottom the White Fisher; the seven marks on the left were war parties he led.

The three marks in the middle are for wounds.

The moose head is to record a desperate fight he had with a bull moose, while his success in war and in peace are also stated.

This inscription could be read only by those knowing the story, and is rather as a memory help than an exact record.



# MICROCOPY RESOLUTION TEST CHART

(ANSI and ISO TEST CHART No. 2)



5.0

5.6

6.3

7.1

8.0

9.0

10






APPLIED IMAGE Inc

1653 East Main Street  
Rochester, New York 14604 USA  
(716) 482-0300 Phone  
(716) 288-5989 Fax

## Weather Signals

(Adopted for general use by the United States Signal Service on and after March 1, 1887.)

No. 1 White Flag	No. 2 Blue Flag	No. 3 Black Triangular Flag	No. 4 White Flag Black Centre	No. 5 White and Blue
				
Clear or Fair	Rain or Snow	Temperature	Cold Wave	Local Rain or Snow

No. 1, white flag, clear or fair weather, no rain.

No. 2, blue flag, rain or snow.





No. 3, black triangular flag, refers to temperature, and above Nos. 1 or 2 indicates warmer weather; below No. 1 or 2, colder weather, and when not displayed, stationary weather.

No. 4, white flag with black centre (cold wave flag), sudden fall in temperature; this signal is usually ordered at least twenty-four hours in advance of the cold wave. It is not displayed unless a temperature of forty-five degrees or less is expected, nor is flag No. 3 ever displayed with it.

No. 5, means local rain or snow; with 3 above it means with higher temperature; and with 3 below it means lower temperature.

A red flag with a black centre indicates that a storm of marked violence is expected.

## Display Examples

			
Colder. Fair Weather	Rain or Snow Warmer	Warmer. Fair Weather, followed by Rain or Snow	Cold Wave. Fair Weather



## Storm and Hurricane Warnings



N. E.  
Winds.



S. E.  
Winds



N. W.  
Winds



S. W.  
Winds



Hurri-  
cane

**STORM WARNINGS.**—A red flag with a black centre indicates a storm of marked violence. The pennants displayed with flags indicate direction of wind—red, easterly; white, westerly; pennant above flag indicates wind from northerly quadrants; below, from southerly quadrants.

By night a red light indicates easterly winds, white light below red, westerly winds. Two red flags with black centres indicate approach of tropical hurricane. No night hurricane signals are displayed.

## Signals on the Railway

Most of us are familiar with some of the signals given by brakemen, conductors, or engineers, but not so many of us have sat right down to inspect the code, as officially fixed. A conductor on the Canadian Pacific Railway allowed me to copy it out from his "Trainman's Book," 1909, and since then I have been told that this is the code in universal use, so I give it in full.

It consists of color signals, hand and lantern signals, toots and cord-pulls. It will add a new interest to the journey, at least when you can read the "Signs of the Iron Trail," and the "Talk of the Iron Horse."

### The Code

(From C. P. R. "Trainman's Book," 1909, No. 7563; but in general use.)

#### Colors:

Red = stop.

Green = Go ahead.

Yellow = Go cautiously.

Green and White = flag station. Stop at night.

Blue = Workmen busy under car.

#### Hand, Flag and Lamp Signals:

Swung across track . . . . . Stop.

Raised and lowered vertically . . . . . Go ahead.

Swung at half-arms' length, in small circle

across track, train standing . . . . . Back up.

Swung vertically in a big circle at arms' length across the track, when train is running . . . . .	Train broken in two.
Swung horizontally above head, when train is standing . . . . .	Put on air-brakes.
Held at arms' length above the head, when train is standing . . . . .	Release air-brakes.

#### Other Hand Signals, modifications of the above:

Hand (or hands) held out horizontally and waved up and down . . . . .	Go ahead.
Hand (or hands) suddenly drawn flat and horizontal . . . . .	Stop.
Sometimes hands raised and held palms forward . . . . .	All right.
Arm thrust forward and swept back opposite shoulders, as in beckoning . . . . .	Come back.

#### Signals by Engine Whistle:

(o a short toot. — a long one)

o = Stop; put on brakes.

— — = Take off brakes; get ready to start.

— ooo = Flagman go out to protect rear of train.

— — — — = Flagman returned from west or south.

— — — — = Flagman returned from east or north.

— — — — = (When returning) Train broken in two.  
To be repeated till answered by the same from the trainman, i. e., No. 4 in hand, flag, and lamp signals. Similarly, this is the answer to No. 4 of hand, flag, and lamp signals.

oo = (All right) the answer to any signal not otherwise provided for.

ooo = (When the train is standing) back up; also is reply to signals to "back up."

oooo = Call for signals.

— oo = Calls attention of other trains to signals.

oo = The acknowledgment by other trains.

— — oo = Approaching grade-crossings, and at whistle posts.

— — = Approaching stations.

o — = (When double-heading) Air-brakes have failed on leading engine, and second

engine is to take control of them.  
Second engine repeats same as soon as  
it has control.

oooooooooooo, etc. = Cattle (or persons) on the track.

Air-whistle or Cord-pull:

When the train is standing:

Two blasts = Start.  
Three " = Back.  
Four " = Put on or take off brakes.  
Five " = Call in flagman.

When the train is running:

(All but the 2d are answered by 2 blasts)  
Two blasts = Stop at once.  
Three " = Stop at next station.  
Four " = Reduce speed.  
Five " = Increase speed.  
Six " = Increase steam-heat.  
Seven " = Release air-brakes, or sticking brake.

The engineer responds to these with two short toots, meaning "All right," except in the second, when the engineer answers in three short toots.

## Roof Camping and Gardening

In our big cities where land is so valuable that an acre commonly brings millions of dollars, we have long been pinched for playgrounds, and Woodcraft pursuits seem out of the question. All the cry of overstocked cities is for light and space. And with all this need, we have long shut our eyes to a most obvious and abundant supply.

In New York, congested New York, for example, there are thousands of acres of open sunlight, well-ventilated unused space, which a very slight acquaintance with Oriental or Occidental nations would have taught us to use. We refer to the flat roofs of the houses. In Greater New York these must amount to nearly ten thousand acres; half at least of this offers good chances for roof camps or roof gardens.

A roof camp is now being considered under the guidance of the Woodcraft League. It has first a parapet all about, then a higher wall of strong mesh wire. Along one side is a row of small "dog"

tents. In a brazier, secure in the middle of a stone hearth, is a fire. An elevator near by affords a quick trip to the swimming tank in the basement. Some semblance of verdure is offered by vines and trailers in boxes; and thus, a hundred feet above the street, the boys or girls are in another world, and can dress and live much as in camp.

Many little experiments are now being made to utilize these waste spaces; roof gardens are very possible to-day; flowers, fruit, and vegetables can be grown successfully, and even bird sanctuaries are being attempted.

These are not yet a success; but it seems likely that, with food, drink, shelter, protection, and nesting boxes supplied, we could in time induce some acceptable birds to found their little colonies in such places. English sparrows and starlings would doubtless be the first to respond, but there are some reasons for expecting success also with swallows, martins, nighthawks, sparrowhawks, screech-owls, pigeons, etc.; while some western species like the crimson house-finch might be brought in on trial.

The whole field is open at present and almost unexplored, but it seems to be one of unusual promise.

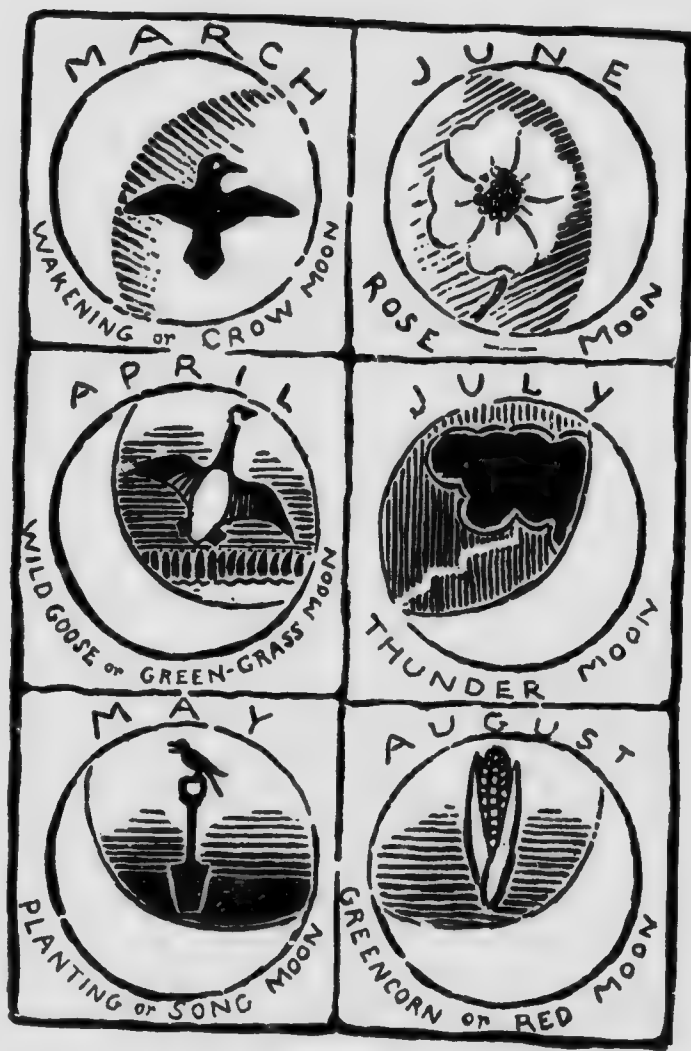
### Individual Tally Book

Every Woodcraft Boy should have an Individual Tally Book and notebook. Nothing adds so much to future enjoyment as such a record of achievements, exploits, and knowledge; to say nothing of the souvenirs in forms of photos, sketches, rhymes, and songs. It adds greatly to the interest and value if the book is bound in a leather cover which may be decorated in various ways.

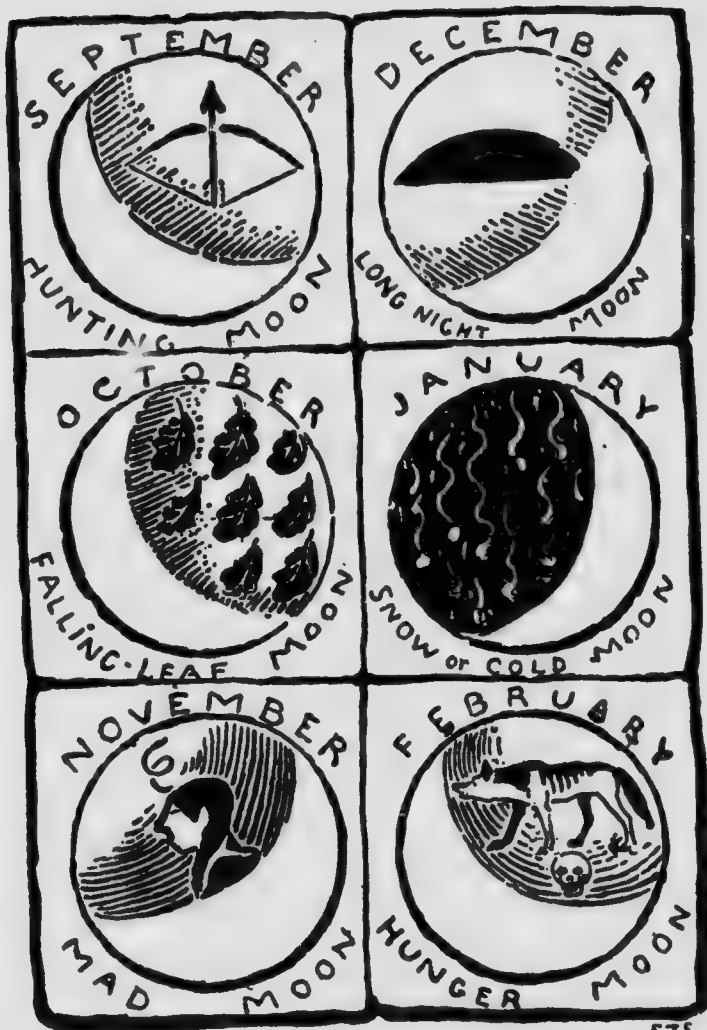
### Indian Names for the Months

Most all primitive people called the months "Moons." The North American Indians particularly were noted for naming the months quaintly and well. The following is a list which may be used:

(January) Snow, (February) Hunger, (March) Crow or Wakening, (April) Wild Goose or Green Grass, (May) Planting, (June) Rose, (July) Thunder, (August) Green Corn or Red, (September) Hunting, (October) Falling Leaf, (November) Mad, (December) Long Night.



E.T.S.



## **CHAPTER II**

### **CAMPERCRAFT**

#### **Campercraft**

**Camping Out**

**Outfitting**

**Outfit for Six**

**Tents**

**Teepees**

**Running Camp**

**Camp Grounds**

**Arriving**

**Sanitation**

**Leadership**

**Team Work**

**Camp Off**

**Camp Pro**

**Group Work**

**Rules**

**Inspections**

**Horns of High Hikers**

**Woodcraft Council Ring**

**Councils**

**Making Council Fire**

**Totem Pole**

**Beds**

**Water**

**Mosquitoes**

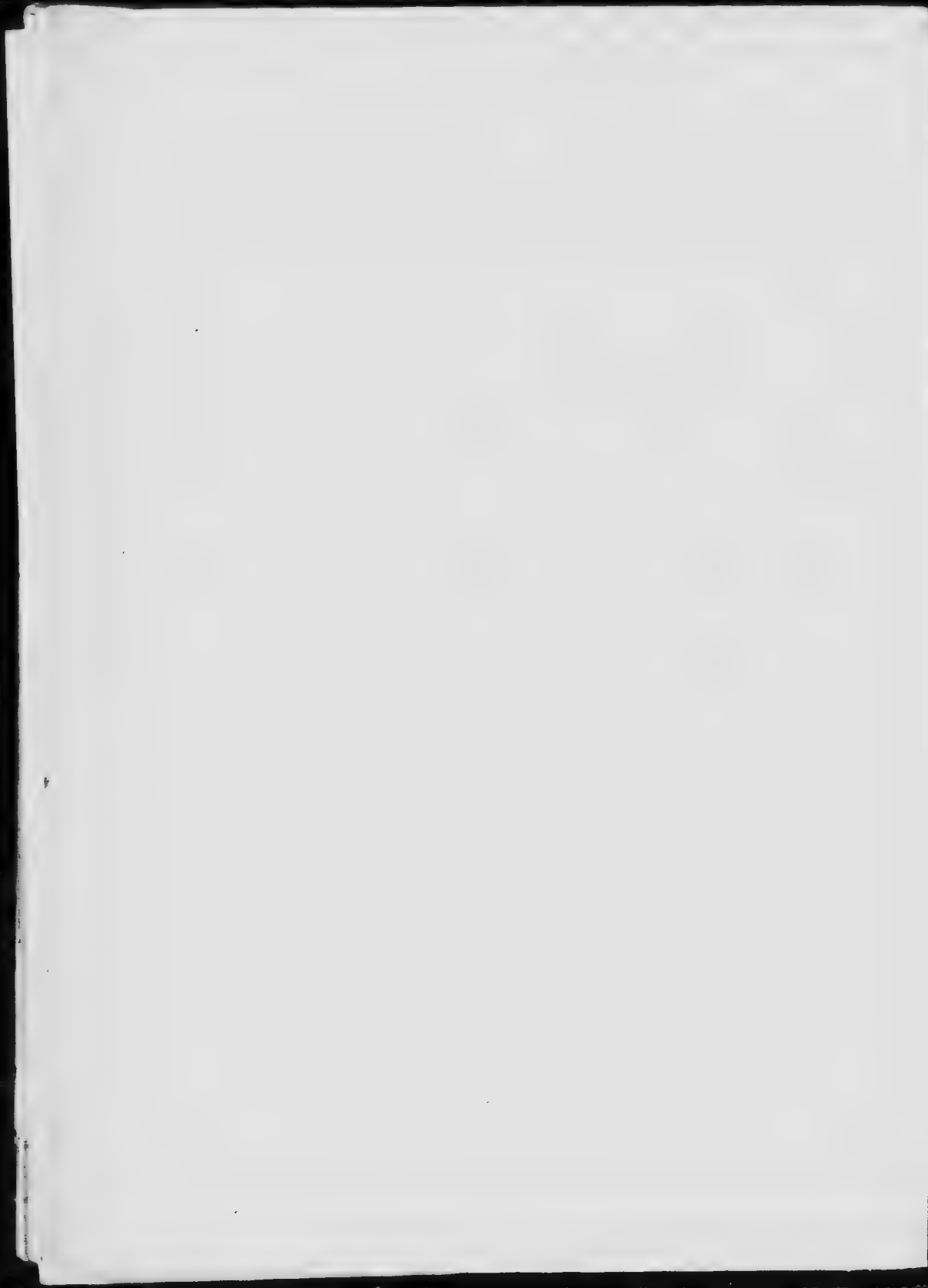
**Lighting a Fire**

**Camp Cookery**

**Cooking Without Utensils**

**Gee-String Camp**

**Camp Horn**





## CHAPTER II

### CAMPERCRAFT

#### Camping Out

Every boy who knows the fun and help of camping out looks forward to living in the open. Not so long ago camping out meant roughing it in the extreme—sleeping in an uncomfortable bed without proper clothing and food. Some of these things may be necessary at times, but the wise camper aims to live comfortably.

Camping out offers a number of priceless benefits and is also beset by one or two dangers. Those who are wise campers get the good and avoid the dangers.

The good things are the pure air, the bracing and lung-healing power of the woods, the sun bath, the tonic exercise, the nerve rest, and the joy that comes from control of mind and body.

The bad things are the danger of rheumatism from sleeping on the ground in damp clothes, the exhaustion from bad nights through insufficient bed clothes or an uncomfortable bed, and the discomfort and ill health arising from irregular meals and badly cooked food.

By wisely selecting the equipment, the place, and being informed regarding the simple rules of camping, every Woodcraft Boy will find a camping out experience the biggest thing in his life and one he will look back on with great pleasure and forward to with the keenest anticipation. It can and should mean a return to the home with the body strong and healthy, the mind bright and happy, and the soul strengthened and fortified because of the experience of coming close to the earth in company with other boys of similar tastes.

If any judgment is used in promptly changing wet clothes when not in action, in never sleeping directly on the ground, and in placing the bed in a dry place and that there is plenty of warm bedding, there will be no danger of either colds or rheumatism. It is *always* wise to have some warm clothing especially for cold or damp weather.

It is also good to go on the trip with a definite object. If the

camp is to be at the same place during the stay, it is well to decide before going to learn something about the trees, birds, flowers, camp cookery, etc., also to have a fairly definite idea as to how the days will be spent. Do not make the mistake of "lazing around" too much.

The woods is a much safer place than home, though this is contrary to the average impression.

If your eyes and ears are kept open, more interesting things than can be counted will be found within a short distance.

It may be that the change from the city to camp will be a sudden one and that readjustment will be necessary. If the camper is a little homesick, it is well to fight it off and it will not be long before all will have the feeling old campers have. There will be something in the rippling lake, the green of the trees, the whispering of the breeze, the sunlight, the blue sky, twilight in the woods, the smell of food cooking over the campfire, and the mystery of the campfire itself that will grip and call the camper back again. And through it all will come that control of muscle and mind that only the outdoor folk have.

## OUTFITTING

### Outfit for a Party of Six (Camping One Week in Fixed Camp)

1 12-foot teepee (if for cold weather), accommodating five or six, not forgetting a stove-cap,

Or, in summer, a 10 x 12 wall tent.

18 x 10 awning for kitchen and dining-room, in hot or wet weather.

5 yards mosquito-bar and some dope for stinging insects.

3 or 4 one-gallon bags of cotton for supplies.

A few medicines and pill-kit or "first aid," including cold cream, vaseline, or talcum powder for sunburn.

1 strong clothes line; ball of cord; ball of twine; ball of strong linen pack-thread.

Axe.

A sharp hatchet.

Claw-hammer.

Whetstone.

Small crosscut saw.

Spade.

File.

Packing needles and sewing-kit for repairing clothes.

Nails: One lb. of  $1\frac{1}{2}$ , two lbs. of  $2\frac{1}{2}$ , two lbs. of  $3\frac{1}{2}$ , and one lb. of 5-inch.

Soap.

Mirror.

Toilet paper.

Waterproof match-box.

Cooking outfit: Either a ready-made, self-nesting "Buzza-cot," or

3 cover-kettles, 10-qt., 4-qt., and 2-qt. (riveted, not soldered).

1 frying-pan, with handle and cover.

2 big spoons.

2 wire grills.

1 butcher knife.

1 bucket.

Salt and pepper casters.

Dishpan.

Coffee-pot (riveted).

Dishcloths and towels.

Folding lantern and supply of candles.

And for each boy, plate, cup, saucer, also knife, fork, and spoon.

And such other things as are dictated by previous experience or for use in the games to be played.

Besides which each member has ordinary clothes, with a change, and toilet-bag, also:

A rubber blanket.

2 wool blankets.

1 cotton or burlap bed-tick,  $2\frac{1}{2} \times 6\frac{1}{4}$  ft.

Bathing suit.

A pair of "sneaks" or sport shoes.

Woodcraft suit.

Fishing tackle, according to choice.

Pocket knife.

Food to last six boys one week:

Assorted cereals (oatmeal, wheatena, etc.) . . . . .	6 lbs.
Rice . . . . .	2 lbs.
Crackers . . . . .	10 lbs.
Cocoa . . . . .	3 lbs.
Tea . . . . .	$\frac{1}{2}$ lb.
Coffee . . . . .	3 lbs.
Lard . . . . .	5 lbs.
Sugar . . . . .	6 lbs.
Condensed milk . . . . .	12 cans

Butter . . . . .	7 lbs.
Eggs . . . . .	3 dozen
Bacon . . . . .	15 lbs.
Preserves (better still, fresh fruit if it can be obtained) . . . . .	5 lbs.
Prunes . . . . .	3 lbs.
Maple syrup . . . . .	3 quarts
Cheese . . . . .	1 lb.
Raisins . . . . .	3 lbs.
Potatoes . . . . .	$\frac{1}{2}$ bushel
White beans . . . . .	3 quarts
Canned corn . . . . .	3 cans
Flour . . . . .	25 lbs.
Baking-powder . . . . .	1 lb.
Concentrated soups . . . . .	$\frac{1}{2}$ lb.
Salt . . . . .	2 lbs.
Pepper . . . . .	1 ounce
Sardines . . . . .	4 packages
Dried beef . . . . .	1 lb.
Macaroni . . . . .	2 lbs.

Fresh fish and game are pleasant variations, but seem to make little difference in the grocery bill.

### Tents

There are many styles of small tents on the market; almost any of them answer very well. For those who wish to equip themselves with the latest and best, a 10 x 12-foot wall tent of 10-ounce double-filled army duck, stained or dyed yellow, brown, or dull green, is best. It will accommodate a party of five or six.

For tramping trips, light tents of waterproof silk are made. One large enough for a man weighs only two or three pounds.

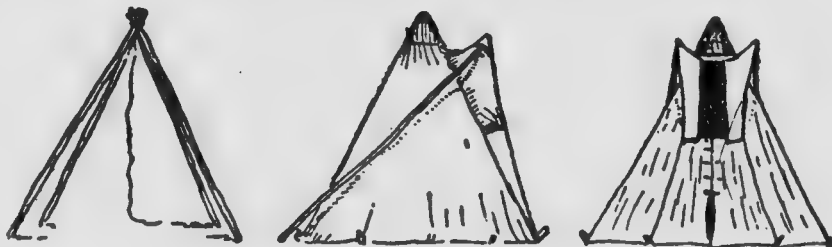
Any of the established makers can supply what is needed if they know the size of the party and nature of the outing.

### Teepees

The Indian teepee has the great advantage of ventilation and an open fire inside. It has the disadvantage of needing a lot of poles and of admitting some rain by the smoke-hole.

A new style of teepee, invented by myself some years ago, has been quite successful, since it combines the advantage

of teepee and tent and needs only four poles besides the smoke-poles. It is, however, less picturesque than the old style.



This gives the great advantage of an open fire inside, and good ventilation, while it is quite rainproof.

It can be put up with four long poles *outside* the canvas, the poles crossing at the top as in the Indian teepee. Of course the point of the cover is attached before the poles are raised.

It may be got from D. T. Abercrombie & Co., 311 Broadway, New York.

## RUNNING CAMP

### Camp Grounds

In selecting a good camp ground the first thing to look for is a dry, level place, near good wood and good water. It is desirable to have the camp face the east and to have some storm break or shelter on the west and north; then it gets the morning sun and the afternoon shade in summer. Sometimes local conditions make a different exposure desirable. For obvious reasons it is well to be near one's boat landing.

### Arriving at Camp

As soon as all are on the ground with their baggage, locate the places for the tents (ordinarily this should be done in advance). If the camp is a large one let the leaders allot the locations. Try to have each tent about twenty-five feet from the next, in a place dry and easy to drain in case of rain and so placed as to have sun in the morning and shade in the afternoon. Trench each tent carefully. Pitch at a reasonable distance from the water supply and from the latrine.

### Sanitation

As soon as convenient appoint members to dig and prepare a latrine, or toilet, with screen. It should be located some distance from the camp and from the water, so that there will be no possibility of contaminating the water.

All litter and refuse should be handled in such a way that the camp grounds are clean, that the garbage is kept covered till disposed of by burning or burying. Woodcraft camps are known for their cleanliness and for the fact that when the camp is over the grounds are as clear of filth, scraps, papers, cans, bottles, etc., as though no human being had ever been there. Anything which draws flies should be carefully avoided.

### Leadership

Of course no group would go camping without having some one to act as the Guide or leader. The Guide should be in charge of the camp, supervise the swimming, games, the routine and daily life of the camp. He should decide matters of dispute and with the Tally Chief and Chief of the band, and any others they may care to add, decide matters which require decision. In large camps he will be assisted by assistant guides, each in charge of a group of boys, along with the Chief of each group.

### Team Work

There is no place where team work is more needed than in camp. Here boys really "live together," and only as each and every member of the camp does his part will the camp be a complete success. This will mean that the work should be assigned daily to individuals or to groups, depending on the size of the camp. Even the first day rough assignments should be made and just as soon as everybody is settled down, methodic work should be begun. For small groups the following duties should be assigned:

First, Health Chief. Gather up and destroy all garbage each day at a given hour and inspect the latrine hourly and see that all keep the rules.

Second, Mail Chief. Take all letters to the post and bring back all the mail.

Third, Cook. Is responsible for the preparation of the meals for the day.

Fourth, Cook's Assistant. When there is sufficient work the assistant may get ice, or do other similar work.

Fifth, Cook's Wood. Cut sufficient supply of wood for the cook's use.

Sixth, Council Fire Wood. Have the wood cut and laid for the Council Fire with sufficient supply for the evening. Must keep the Council Fire bright, not big, but never dull.

These appointments in the case of larger camps will be given to a band or tent group. The main thing is to see that each boy or each tent group is definitely assigned to a duty and that the work is well done.

## Camp Officers

If the band has not already elected a Tally Keeper it may do so with the approval of the Guide, making sure that the Tally Keeper is representative of the camp and one who will keep a record every day, all being written in the Tally Book.

## Camp Program

There should be a regular routine so that everybody may know when things happen. The following is given as a good one; it may be changed to meet the needs of the camp:

- 6:30 A. M. Turn out, bathe, etc.
  - 7:00 Breakfast.
  - 8:00 Air bedding in sun, if possible.
  - 10:00 Woodcraft games and practice.
  - 11:00 Swimming.
  - 12:00 M. Dinner.
  - 1:00 P. M. Talk by leader.
  - 2:00 Games, etc.
  - 5:00 Swimming.
  - 6:00 Supper.
  - 7:00 Evening Council.
  - 9:15 Lights out.
- Sometimes High Council for a few minutes instead of in the morning.

Whether the camp is large or small, the boys should learn to respond promptly. Those who fail to do so should be made to realize the consequence of their carelessness.

## Group Work

When the camp has several bands it is wise to work out the rules of the camp and its activities, so as to lay emphasis on the

band or tent group. The group should gain or suffer according to the good work or bad work of its members. Some camps give points for good and bad work and the band or tent group is credited with the work of their members. This same idea should be carried out in competitions for the whole camp, so that the band which does the best work during the season would be given recognition of some sort.

### Rules

Each camp will make rules when necessary, but the following will be found good in every camp:

No firearms.

No swimming, except at regularly appointed times and places.

No campers should leave camp without permission.

Loose straw, cans, papers, bottles, glass, or filth of any kind lying around are criminal disorder.

Each group is responsible for order as far as the half line between them and the next group.

### Inspections

The Guides of the various bands or the one appointed in the smaller group should inspect at least once a day.

The officer appointed to inspect goes from tent to tent. Each Band is allowed fifty points for normal, then docked one to ten points for each scrap of paper, cans, or rubbish left lying about; also for each disorderly feature or neglect of the rules of common sense, decency, or hygiene, on their territory; that is, up to half-way between them and the next group. They may get additional points for unusually fine work; but it is always as a Band that they receive the points, though it was the individual that worked for them.



### The Horns of the High Hikers

After the inspection, the Chief announces the winning Band saying: "The Horns of the High Hikers were won to-day by . . . Band." And the horns are accordingly hung on their standard, pole, or other place, for the day. At the end of the camp, the Band that won them oftenest carries them home for their own; and ever afterward are allowed



to put in one corner of their banner a small pair of black horns.

What are they? Usually a pair of polished buffa' horns with a fringed buckskin hanger, on which is an inscription saying that they were won by . . . Band at such a camp.

When buffalo horns cannot be got, common cow horns or even horns of wood are used.

## Woodcraft Council Ring

In every large permanent camp a Woodcraft Council Fire Circle should be established at once. The uses and benefits of this will be seen more and more, as camp goes on.

For the Woodcraft Council Ring, select a sheltered, level place that admits of a perfectly level circle 30 feet across. On the outer rim of this have a permanently fixed circle of very low seats; 6 inches is high enough, but they should have a back, and ultimately a rain shed to protect those seated. Each Band should make its own seat, and always sit there during Council. On the back of the seat should be two loops of wire or string in which to put their standard. Back of the first row should be a slightly higher row. If the ground slopes up, all the better, but in any case there should be *fixed seats enough for all the camp*. The place should be carefully leveled and prepared, and kept always in order, for it will be used several times each day, either for Councils or for games, dances, and performances.

At one side of the ring in a conspicuous place should be the throne of the Chief; close by this a desk and seat for the Tally Keeper and on the desk should be a lantern holder; in the exact middle of the ring is the Council Fire, never a bonfire.

## Councils

Three kinds of Councils are held in the Woodcraft Council Ring:

1. The *High Council* of the Chiefs and Guides daily, and at other times when called, arranges programs.
2. The *General or Common Council* of all the campers every night from seven to nine o'clock. At this we have some business (in the awarding of honors), some campfire stunts or challenges, and a little entertainment.
3. *Grand Council*. This is usually held once a week. Every one comes in full Woodcraft costume. Visitors are invited.

Business, except when very interesting, is dispensed with, and a programme of sports and amusements, chiefly for the visitors, is carefully prepared. This is "Strangers' Night" and they should be entertained, not bored.

### Making Council Fire

The Council Fire is a very different thing from the cooking-fire or the so-called bonfire. And there are just as many ways of making it wrong.

These are the essentials:

It must be easily started.

It must give a steady, bright light.

It must have as little heat as possible, for it is mostly used in the summer. Therefore, it must be small.

It is best built as in (c), about two and one half feet high; the bottom stick about three feet long; the rest shorter and smaller.

The small wood and chips to light it can be put either under or on top of the second layer.

It should be drawn in toward the top, so as to burn without falling apart.

It must contain a large proportion of dry, winter-seasoned wood, if it is to blaze brightly. The readiest seasoned wood is usually old lumber.

For an all-evening Council Fire, at least three times as much should be in stock as on the fire when started.

Here are some wrong methods:

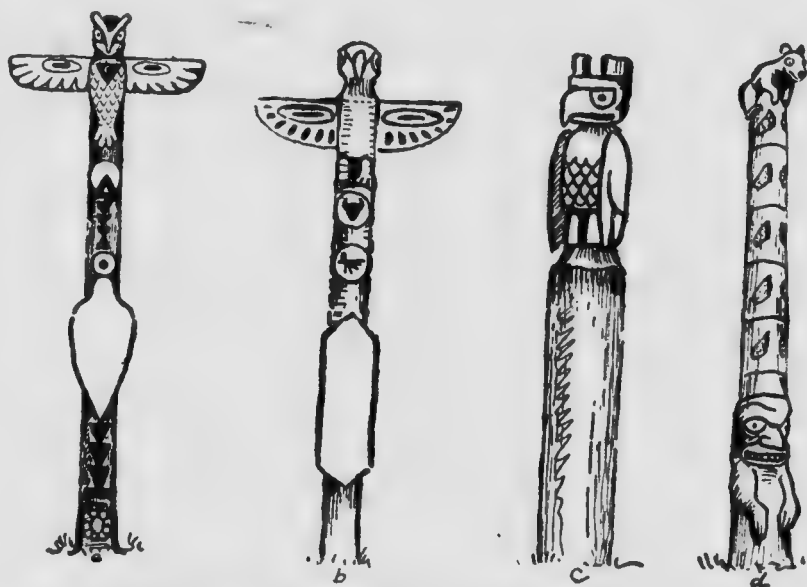


The high pyramid or bonfire (a) goes off like a flash, roasts every one, then goes dead. The shapeless pile (b) is hard to light and never bright. The bonfire is always bad. It wastes good wood; is dangerous to the forest and the camp; is

absolutely unsociable. A bonfire will spoil the best camp-circle ever got together. It should be forbidden everywhere.

## Totem Pole

Directly opposite the Chief's throne, on the outer edge of the circle, should be the Totem Pole. This is always set up as soon as possible in all permanent camps. Its purpose is, 1st, to typify the movement; 2d, to display the Totems of the Tribe, 3rd, to serve as a place of notice. Any document posted on the Totem Pole is considered published.



a. Totem Pole of the Becket Tribe (15 feet high)

b. of Flying Eagles

c and d. from Niblack's West Coast Indians, Eagles and Bears

## Beds

Of all things, the camper's bed is the thing most often made wrong, and most easily made right, when one knows how; and of all things comfort at night is most essential.

Every dealer in camp outfits can produce an array of different camp beds, cots, and sleeping bags, that shows how important it is to be dry and warm when you sleep.

The simplest plan is the oldest one—two pair of blankets and

waterproof undersheet on a neatly laid bed of evergreen boughs, dry leaves, or dry grass. The ideal way of laying the boughs is shown in the figure below.

*When I can't get grub of the Broadway sort,  
I'll fatten on camper's fare,  
I'll tramp all day and at night resort  
To a bed boughed down with care.*



But there are few places now in eastern America where you are allowed to cut boughs freely. In any case you cannot take the bough bed with you when you move, and it takes too much time to make at each camp.

Sleeping bags I gave up long ago. They are too difficult to air, or to adjust to different temperatures.

Rubber beds are luxurious, but heavy for a pack outfit, and in cold weather they need thick blankets over them, otherwise they are too cool.

So the one ideal bed for the camper, light, comfortable, and of wildwood stuff, is the Indian or willow bed, described on p. 232.

### Water, or the Indian Well

If there is a swamp or pond, but no pure water at hand, you can dig an Indian well in half an hour. This is simply a hole about 18 inches across and down about 6 inches below water-level, a few paces from the pond. Bail it out quickly; let it fill again, bail it a second time, and the third time it fills, it will be full of filtered water, clear of everything except matter actually dissolved.

It is now well known that ordinary vegetable matter does not cause disease. All contamination is from animal refuse or excreta, therefore a well of this kind in a truly wild region is as safe as a spring.

## Mosquitoes, Black Flies, etc.

If you are camping in mosquito or fly season, the trip may be ruined if you are not fully prepared.

For extreme cases, use the ready-made head-nets. They are hot, but effectual. You can easily get used to the net; no one can stand the flies. In my Arctic trip of 1907, we could not have endured life without the nets. Indians and all wore them.

Of the various dopes that are used, one of the simplest and best is Colonel N. Fletcher's, given in Kephart's "Book of Camping and Woodcraft":

"Pure pine tar . . . . .	1 oz.
Oil pennyroyal . . . . .	1 oz.
Vaseline . . . . .	3 ozs.

"Mix cold in a mortar. If you wish, you can add 3 per cent. carbolic acid to above. Some make it 1½ ozs. tar."

Most drug shops keep ready-made dopes under such names as Citronella, Repellene, Lollakapop, etc.

## Lighting a Fire

The day Columbus landed (probably) the natives remarked: "White man fool, make big fire, can't go near; Indian make little fire and sit happy."

We all know that a camp without a campfire would be no camp at all; its chiefest charm would be absent.

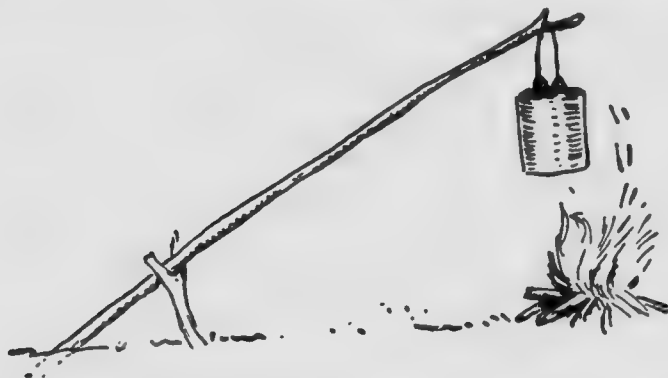
Your first care, then, is to provide for a small fire and prevent its spreading. In the autumn this may mean very elaborate clearing, or burning, or wetting of a space around the fire. In the winter it means nothing.

Cracked Jimmy, in "Two Little Savages," gives very practical directions for lighting a fire anywhere in the timbered northern part of America, thus:

*"First a curl of burch bark as dry as it can be,  
Then some twigs of soft wood, dead, but on the tree,  
Last of all some pine-knots to make the kittle foam,  
And there's a fire to make you think you're settin' right at home."*

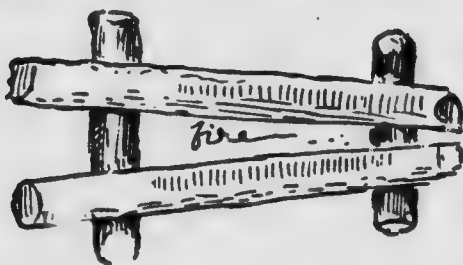
If you have no birch bark, it is a good plan to shave a dry soft-wood stick, leaving all the shavings sticking on the end in a fuzz, like a Hopi prayer stick. Several of these make a sure fire kindler. Fine splinters may be made quickly by hammering a small stick with the back of the axe.

In the case of a small party and hasty camp, you need nothing



but a pot hanger of green wood for a complete kitchen, and many hundreds of times, on prairie and in forest, I found this sufficient.

A more complete camp grate is made of four green logs (aspen preferred) placed as in the illustration. Set the top logs 3 inches apart at one end, 10 inches at the other. The top logs should be flattened in the middle of their top sides—to hold the pot, which sits on the opening between the top logs. The fire of course is built on the ground, under the

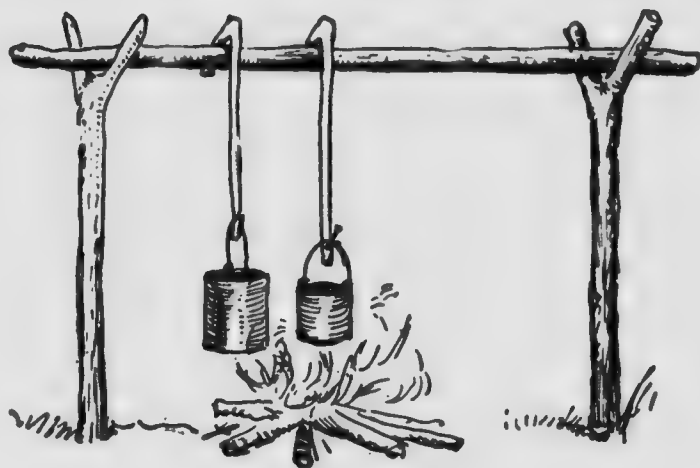


Green Log Grate

logs. Sometimes stones of right size and shape are used instead of the logs, but the stones do not contribute anything to the heat and are less manageable.

In addition to this log grate, more elaborate camps have a kitchen equipped with a hanger as on next page, on which are pot hooks of green wood.

In wet weather an axeman can always get dry wood by cutting into a standing dead tree, or on the under side of down timber that is not entirely on the ground.



Camp Kitchen

On the prairies and plains, since buffalo chips are no more, we use horse and cow chips, kindled with dry grass and roots of sage-brush, etc.



To keep a fire alive all night, bank the coals: i.e., bury them in ashes.

*Always put out the fire on leaving camp.*

*It is a crime to leave a burning fire.*

*Use buckets of water if need be.*

### Camp Cookery

See Horace Kephart's "Book of Camping and Woodcraft."

In most camps the staples are: cocoa, coffee (or tea), bacon, game, fish, and hardtack, bannocks or biscuit.

To make these take

1 pint flour,  
1 teaspoonful of baking-powder,  
Half as much salt,  
Twice as much grease or lard,

With water enough to make into paste, say one half a pint.

When worked into smooth dough, shape it into wafers half an inch thick and three inches across. Set in a greased tin, which is tilted up near a steady fire. Watch and turn the tin till all are browned evenly.

For other and better but more elaborate methods of making bread, see Kephart's book as above.

For cooking fish and game the old, simple standbys are the frying-pan and the stew-pan.

As a general rule, mix all batters, mush, etc., with cold water, and always cook with a slow fire.

When going into camp not far from home some think it a good plan to take a cold roast of beef with them.

Soup stock should be made the first days of every bit of bones and meat.

There is an old adage:

Hasty cooking is tasty cooking.

Fried meat is dried meat.

Boiled meat is spoiled meat.

Roast meat is best meat.

This reflects perhaps the castle kitchen rather than the camp, but it has its measure of truth, and the reason why roast meat is not more popular is because it takes so much time and trouble to make it a success.

### Cooking Without Utensils

We sometimes call it "hatchet cookery," because the cook is supposed to begin with nothing but a hatchet. To cook a good, toothsome meal with such a meagre outfit is good proof of a skilled Woodcrafter. Let us assume that you have meat, fish, potatoes, flour, and baking-powder, in addition to your hatchet.

*To Boil the Fish.* Make a big fire and in it put twenty stones each as big as two fists. Near by, dig a hole a foot wide and two feet deep. Get a flat hardwood board, a foot long and six or eight inches wide. Clean and lash the fish onto this board, with a grass, rush, bark, or root—binding every inch or more; or else make a little basket lid of rushes, spruce roots, etc., lay that on the fish and bind all to the board. This is your plank. Do not use pine or any gummy wood for this, as it gives the fish a bad taste.

When the stones in the fire are red-hot, roll some into the hole till it is filled up eighteen inches. Then put in a layer of small cold stones, then a layer of grass; now lay your planked fish on this upside down, that is, with the fish under the board. Cover all with a wad of fresh grass and, lastly, with two or three inches of clay. Make a little hole at one side and pour into that about



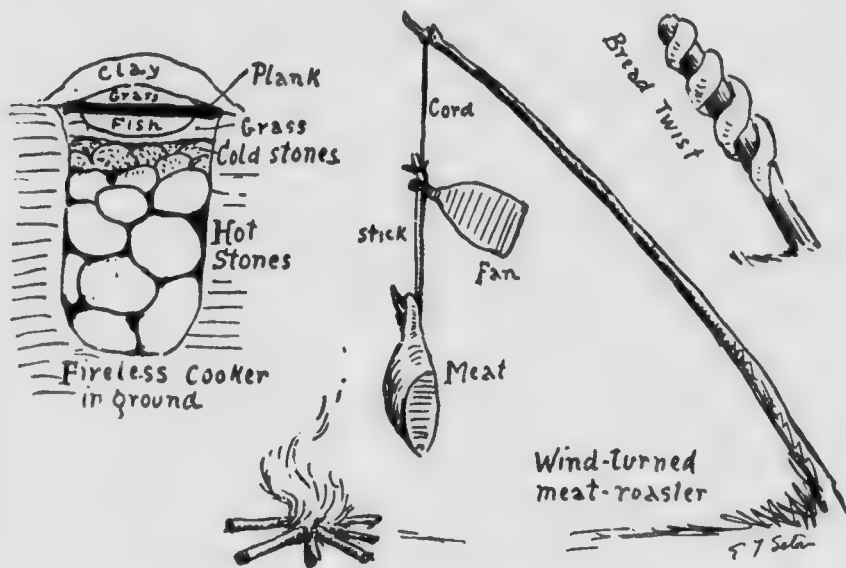
a bucket of water. Close up the hole, cover all tight and leave for half an hour to an hour. Open cautiously, carefully keeping the clay from the fish. Turn the plank and remove the binding. The fish will be found beautifully cooked.

Potatoes take three times as long to do in this way.

*To Broil.* To broil fish, game, or bacon is easy if one make a hot fire, then expose a level bed of coals, fan it once with a hat or board to remove the ashes from the top of the coals, then drop the meat to be cooked right on the coals. It will broil in a minute or two. Turn it over with a stick and the operation will be quickly completed.

*Toasting* is easily done if we cut a forked stick of strong green wood and hold the bread over the fire.

*Roasting.* A good meat roaster is made by hanging the meat in a green wood hook made with a broad wooden fan set in a split near the top and above that a heavy cord to hang it with. Thus the wind, striking the fan, turns the meat and twists the cord



until it is tight; then it unwinds, but, owing to the weight of the meat, goes past the dead point and winds itself up the other way, and so on. This is an especially satisfactory roaster when there is wind.

*Bread.* The test of all is the making of good bread without utensils. Some make a hole in the ground for a breadpan and line it with a corner of a mackintosh. But most old timers use

the top of the flour in the sack itself. Simply spread the mouth wide open and securely level and proceed as though it were a pan.

To make a small loaf of bread, put a teaspoonful of baking-powder on about a pint of flour, add a lump of butter or grease as big as a walnut and a dash of salt. Mix them together, then add about a cupful of cold water, work it into the flour that has been prepared. It will not strike into the flour below. Thoroughly work up the mass of dough and now it is ready for treatment as bread, twist, or as cakes.

*Bread Twist.* Cut a smooth, round stick two or three inches through and three feet long, point one end, drive it in the ground leaning toward the fire at a place just a little hotter than you can hold your hand. Work the dough into a long roll and twist it like a vine around the stick. After ten minutes, turn the stick around in the hole, so as to give the full heat to the other side, and so on; in half an hour, the bread should be brown and finished.

*Cakes.* Select a broad, flat, thin stone; heat it at the fire until it is too hot for your hand to touch; brush it clean, work the dough into cakes half an inch thick and three inches across, put them on the flat stone and prop it up near the fire as steeply as possible, so long as they do not fall off, and roast till pale brown all over.

*Mud Baking.* This is used for fish and game. Clean the food thoroughly, enclose it in a coat of mud at least an inch thick, bury it in the ashes of the fire and keep a brisk fire on it for thirty to sixty minutes, according to the size of the meat or fish to be roasted.

Potatoes can be baked in the ashes without any mud. They take much longer than meat.

### The Gee-String Camp

Whenever complete isolation from summer resorts or mixed company make it permissible, we have found it well to let the fellows run all day during warm weather, clad only in their shoes and their small bathing trunks, breech-clout, or gee-string. This is the Gee-String or Indian Camp. Its value as a daily sun bath, a continual tonic, and a mentally refreshing hark back to the primitive, cannot be overestimated.

### Camp Horn

I wish every camp would get a good camp horn or Michigan lumberman's horn. It is about four feet long, has a six-inch

bell-mouth, and is of brass. Its sounds are made by mouth, but a good player can give a tune as on a post horn. Its quality is wonderfully rich, mellow, and far-reaching, and it can be heard for three or four miles. It is a sound to stir the echoes and fill the camp with romantic memories.



## CHAPTER III

### WOODLORE AND HANDICRAFT

- |                           |                        |
|---------------------------|------------------------|
| Edible Wild Plants        | Camp Broom             |
| Mushrooms                 | Rubbing-stick Fire     |
| White Man's Woodcraft—    | Drum                   |
| Measuring Weights and     | Woodcraft Willow Bed   |
| Distance                  | Making a Teepee        |
| Weather Wisdom            | Archery                |
| When Lost in the Woods    | Woodcraft Paints       |
| Tracking and Trailing     | Woodcraft Dyes         |
| Keeping Up the Old Trails | Lace or Thong          |
| The Value of Doing        | Woodcraft Buttons      |
| Indian Tweezers           | Handicraft Stunts      |
| Indian Clock              | Miscellaneous          |
| Watch as Compass          | Spoons                 |
| Home-made Compass         | Bird Boxes             |
| Lights                    | Sparrow-proof Bird Box |
| Hunter's Lamp             | Knots                  |
| Woodman's Lantern         | Blazes and Signs       |
| Knife and Hatchet         | Stone Signs            |
| Waterproof Shelter        | Grass and Twig Signs   |
| Camp Loom                 | Smoke Signals          |
| Navajo Loom               | Signals by Shots       |
| Camp Rake                 | Tramp Signs            |
| How to Raise Money        |                        |



## CHAPTER III

### WOODLORE AND HANDICRAFT

#### Edible Wild Plants

No one truly knows the woods until he can find with certainty a number of wild plants that furnish good food for man in the season when food is scarce; that is, in the winter or early spring.

During summer and autumn there is always an abundance of familiar nuts and berries, so that we may rule them out, and seek only for edible plants and roots that are available when nuts and berries are not.

*Rock Tripe.* The most wonderful of all is probably the greenish-black rock tripe, found on the bleakest, highest rocks in the northern parts of this continent. There is a wonderful display of it on the cliffs about Mohonk Lake, in the Catskills. Richardson and Franklin, the great northern explorers, lived on it for months. It must be very carefully cooked or it produces cramps. First gather and wash it as clear as possible of sand and grit, washing it again and again, snipping off the gritty parts of the roots where it held onto the mother rock. Then roast it slowly in a pan till dry and crisp. Next boil it for one hour and serve it either hot or cold. It looks like thick gumbo soup with short, thick pieces of black and green leaves in it. It tastes a little like tapioca with a slight flavoring of licorice. On some it acts as a purge.

*Basswood Browse or Buds.* As a child I ate these raw in quantities, as did also most of my young friends, but they will be found the better for cooking. They are particularly good and large in the early spring. The inmost bark also has food value, but one must disfigure the tree to get that, so we leave it out.

*Slippery Elm.* The same remarks apply to the buds and inner bark of the slippery elm. They are nutritious, acceptable food, especially when cooked with scraps of meat or fruit for flavoring. Furthermore, its flowers come out in the spring before the leaves, and produce very early in the season great quantities of seed which look like little nuts in the middle of a nearly circular wing. They ripen by the time the leaves are half grown

and have always been an important article of food among the wild things.

Many Indian tribes used to feed during famine times on the inner bark of cedar and white birch, as well as on the inner bark of the slippery elm and basswood, but these cannot be got without injury to the tree, so omit them.

When the snow is off the ground the plants respond quickly, and it is safe to assume that all the earliest flowers come up from big, fat roots.

A plant can spring up quickly in summer, gathering the material of growth from the air and soil, but a plant coming up in the early spring is doing business at a time when it cannot get support from its surroundings, and cannot keep on unless it has stored up capital from the summer before. This is the logic of the storehouse in the ground for these early comers.

*Wapato.* One of the earliest is wapato, or duck potato, also called common Arrowleaf, or Sagittaria. It is found in low, swampy flats, especially those that are under water for part of the year. Its root is about as big as a walnut and is good food, cooked or raw. These roots are not at the point where the leaves come out but at the ends of the long roots.

*Bog Potato.* On the drier banks, usually where the sedge begins near a swamp, we find the bog potato, or Indian potato. The plant is a slender vine with three, five, or seven leaflets in a group. On its roots in spring are from one to a dozen potatoes, varying from an inch to three inches in diameter. They taste like a cross between a peanut and a raw potato, and are very good cooked or raw.

*Indian Cucumber.* In the dry woods one is sure to see the pretty umbrella of the Indian cucumber. Its root is white and crisp and tastes somewhat like a cucumber, is one to four inches long, and good food raw or boiled.

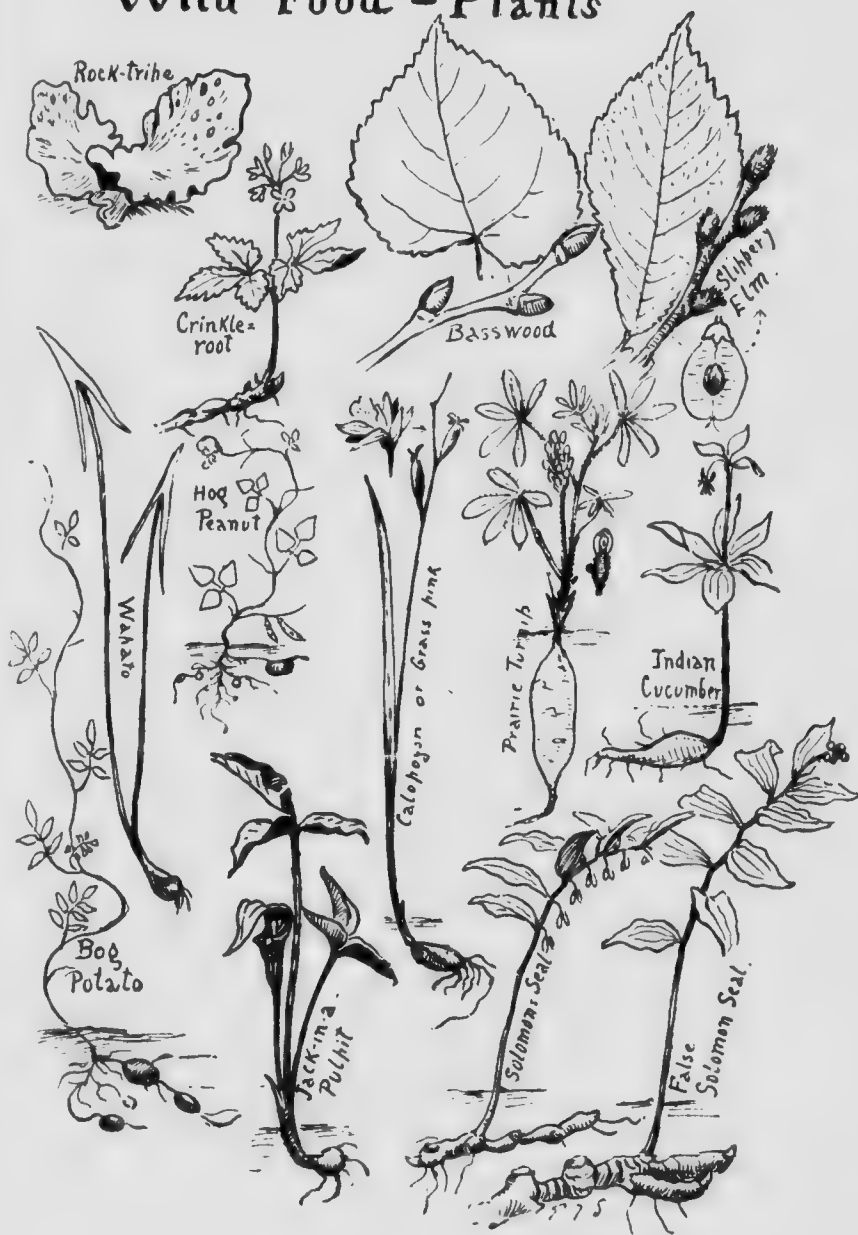
*Calopogon.* This plant looks like a kind of grass with an onion for a root, but it does not taste of onions and is much sought after by wild animals and wild people. It is found in low or marshy places.

*Hog Peanuts.* In the early spring this plant will be found to have a large nut or fruit, buried under the leaves or quite underground in the dry woods. As summer goes by the plant uses up this capital, but on its roots it grows a lot of little nuts. These are rich food, but very small. The big nut is about an inch long and the little ones on the roots are any size up to that of a pea.

*Indian Turnip or Jack-in-the-Pulpit.* This is well known to



# Wild Food - Plants



all our children in the East. The root is the most burning, acrid, horrible thing in the woods when raw, but after cooking becomes quite pleasant and is very nutritious.

*Prairie or Indian Turnip, Bread-root or Pomme-blanc* of the *Prairie*. This is found on all the prairies of the Missouri region. Its root was and is a staple article of food with the Indians. The roots are one to three inches thick and four to twelve inches long.

*Solomon's Seal*. The two Solomon's Seals (true and false) both produce roots that are long, bumpy storehouses of food.

*Crinkle-root*. Every school child in the country digs out and eats the pleasant peppery crinkle-root. It abounds in the rich, dry woods.

### Mushrooms, Fungi, or Toadstools

We have in America about two thousand different kinds of Mushrooms or Toadstools; they are the same thing. Of these, probably half are wholesome and delicious; but about a dozen of them are deadly poison.

There is no way to tell them, except by knowing each kind and the recorded results of experience with each kind. The story about cooking with silver being a test has no foundation; in fact, the best way for the Woodcraft Boy or Girl is to know definitely a dozen dangerous kinds and a score or more of the wholesome kinds and let the rest alone.

*Sporeprint*. The first thing in deciding the nature of a toadstool is the sporeprint, made thus: Cut off the stem of the toadstool and lay the gills down on a piece of gray paper under a vessel of any kind. After a couple of hours, lift the cap, and radiating lines of spores will appear on the paper. If it is desired to preserve these, the paper should be first covered with thin mucilage. The *color* of these spores is the first step in identification.

All the deadly toadstools have *white* spores.

No black-spored toadstool is known to be poisonous.

### Poisonous Toadstools

The only deadly poisonous kinds are the *Amanitas*. Others may purge and nauseate or cause vomiting, but it is believed that every recorded death from toadstool poisoning was caused by an *Amanita*, and unfortunately they are not only widespread and abundant, but they are much like the ordinary

table mushrooms. They have, however, one or two strong marks: their stalk always grows out of a "poison cup," which shows either as a cup or as a *bulb*; they have *white* or *yellow* gills, a ring around the stalk, and *white* spores.

## Deadly Toadstools

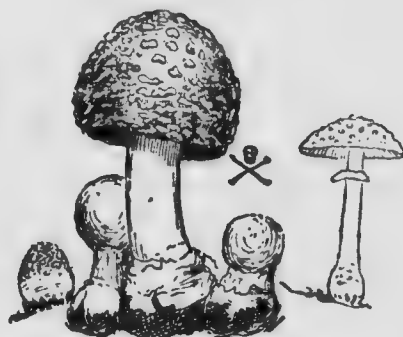
All the deadly toadstools known in North America are pictured on the plate, or of the types shown on the plate.

The Deadly Amanita may be brownish, yellowish, or white.

The Yellow Amanita of a delicate lemon color.



*Amanita phalloides.*



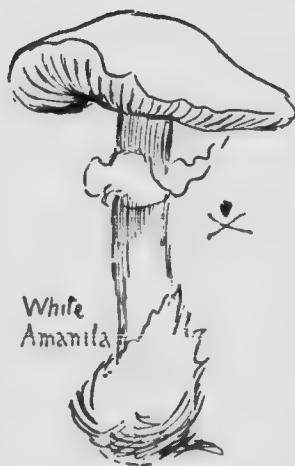
*Fly Amanita.*



*Frost's Amanita*



*Yellow Amanita*



*White Amanita*

The White Amanita of a pure silvery, shiny white.

The Fly Amanita with cap pink, brown, yellow, or red in the centre, shaded into yellow at the edge, and patched with fragments of pure white veil.

The Frosty Amanita with yellow cap, pale cadmium in centre, elsewhere yellowish white, with white patches on warts.

All are very variable in color, etc.

But all agree in these things. They have *gills*, which are *white*, or *yellow*, a *ring on the stalk*, a *cup at the base*, *white spores*, and are *deadly poison*.

### In Case of Poisoning

If by ill chance any one has eaten a poisonous Amanita, the effects do not begin to show till sixteen or eighteen hours afterward—that is, long after the poison has passed through the stomach and begun its deadly work on the nerve centres.

*Symptoms.* Vomiting and purging, "the discharge from the bowels being watery with small flakes suspended, and sometimes containing blood"; cramps in the extremities. The pulse is very slow and strong at first, but later weak and rapid, sometimes sweat and saliva pour out. Dizziness, faintness, and blindness, the skin clammy, cold, and bluish or livid; temperature low with dreadful tetanic convulsions, and finally stupor. (McIlvaine and Macadam, p. 627.)

*Remedy:* "Take an emetic at once, and send for a physician with instructions to bring hypodermic syringe and atropine sulphate. The dose is  $\frac{1}{100}$  of a grain, and doses should be continued heroically until  $\frac{1}{20}$  of a grain is administered, or until, in the physician's opinion, a proper quantity has been injected. Where the victim is critically ill the  $\frac{1}{20}$  of a grain may be administered." (McIlvaine and Macadam, XVII.)

### Wholesome Toadstools

It is a remarkable fact that all the queer freaks, like clubs and corals, the cranks and tomfools, in droll shapes and satanic colors, the funny poisonous looking Morels, Inkcaps, and Boleti are good, wholesome food, but the deadly Amanitas are like ordinary mushrooms, except that they have grown a little thin, delicate, and anæmic.

All the Puffballs are good before they begin to puff, that is as long as their flesh is white and firm.

All the colored coral toadstools are good, but the *White Clavaria* is said to be rather sickening.

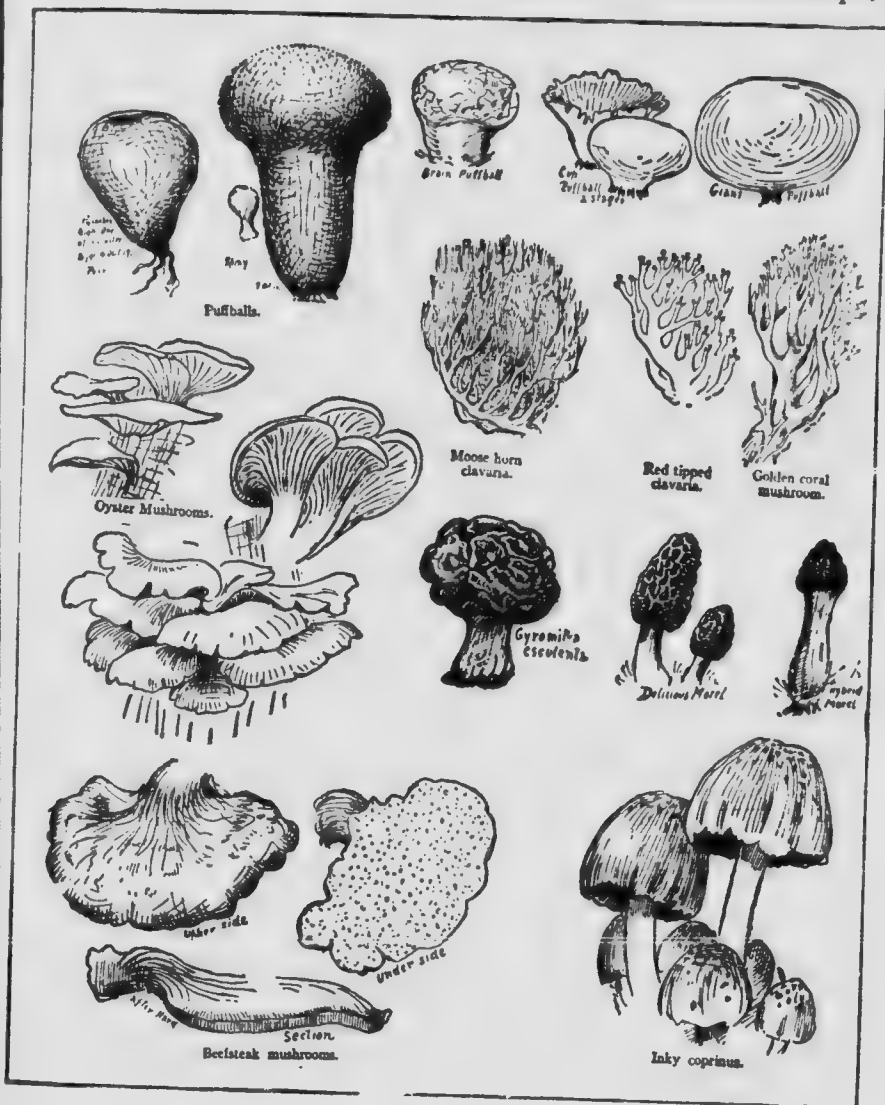
All of the Morels are safe and delicious.

So also is Inky Coprinus, usually found on manure piles.

The Beefsteak Mushroom grows on stumps, chiefly chestnut. It looks like raw meat and bleeds when cut. It is quite good eating.

So far as known no black-spored toadstool is unwholesome.

The common mushroom is distinguished by its general shape,



its smell, its pink or brown gills, its white flesh, brown spores, and solid stem.

### Mushroom Growing

(See Article on "How to Raise Money")

#### Books Recommended

EDIBLE AND POISONOUS FUNGI OF NEW YORK, by Charles H. Peck. Published by New York State Museum, Albany, 1895.

EDIBLE FUNGI OF NEW YORK, by Charles H. Peck. Published by New York State Museum, Albany, 1900.

THE MUSHROOM BOOK, by Nina L. Marshall. Published, 1902, at New York by Doubleday, Page & Co. \$3.50

ONE THOUSAND AMERICAN FUNGI, by McIlvaine & Macadam, \$5. Published by the Bobbs-Merrill Company of Indianapolis, 1902; add 40 cents express.

MUSHROOMS, by G. F. Atkinson. Holt & Co.

THE MUSHROOM, by M. E. Hard. The Ohio Library Company, Columbus, Ohio.

### White Man's Woodcraft

#### or Measuring Weights and Distance

Would you like to tell a dog's height by its track? Then take the length in inches of his forefoot track, multiply it by eight, and that will give you his height at the shoulder. A little dog has a  $2\frac{1}{4}$ -inch foot and stands about eighteen inches; a sheepdog with a 3-inch track measures twenty-four inches, and a mastiff or any big dog with a 4-inch track gives thirty to thirty-two inches.

The dog's weight, too, can be judged by the track. Multiply the width of his forefoot in inches by the length, and multiply that by five and you will have a pretty close estimate of his weight in pounds. This, of course, does not apply to freak dogs.

### The Height of Trees

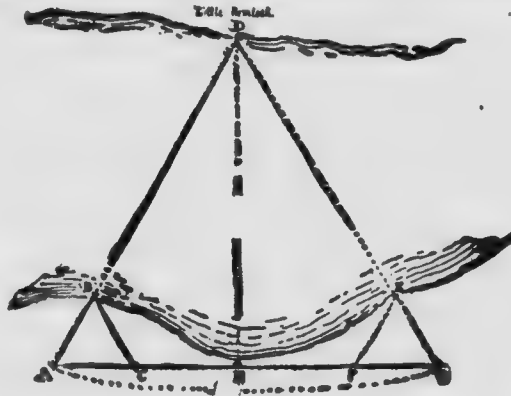
To get the height of a tree, cut a pole ten feet long. Choosing the smoothest ground A, prop the pole some distance from the tree. Lay down so that the eye B is level with the tree base and in line with the top of the pole and the tree. Mark the spot B with a peg and measure the distance from the peg to the foot of the pole, then from the peg to the foot of the tree. The height of the tree will be found by the formula: the distance between the peg and the pole is to the height of the pole as

the distance between the peg and the tree is to the height of the tree or  $BA:AC::BE:X$ . This may be proved by selecting a knot on the tree which may be easily climbed to. See inside line.



### To Measure the Distance Across a Stream

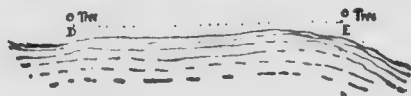
Drive a stake at H. To measure distance from H to D cut three straight poles of exactly the same length and peg them together in a triangle. Place the triangle on the bank at A, B, C, sighting the line A B for the spot at D, and put three pegs



in the ground exactly under the three pegs where the triangle is. Move the triangle to E F G and placing it so that F' G should line with A C, and E G with D. Now A G D almost must be an equilateral triangle; therefore, according to arithmetic, the line D H must be seven eighths of A G, which can of course be easily measured.

### To Measure Distance Between Two Objects at a Distance

Cut three poles six, eight, and ten feet long and peg them together in a triangle. A B C is a right angle according to the laws of mathematics if the legs of the triangle are six, eight, and ten. Place the right angle on the shore, the side A B pointing to the inner side of the first object D (say a tree), and the side



B C as nearly as possible parallel with the line between the two trees. Put in a stake at B, another at C, and continue this line toward K. Now slide the triangle along this till the side G F points to E, and the side H G is in line with C B. The distance from D to E, of course, is equal to B G.

See "Two Little Savages," 1903.

### Weather Wisdom

When the dew is on the grass,  
Rain will never come to pass.

When the grass is dry at night,  
Look for rain before the light.

When grass is dry at morning light,  
Look for rain before the night.

Three days' rain will empty any sky.

A deep, clear sky of fleckless blue  
Breeds storms within a day or two.



When the wind is in the east,  
It's good for neither man nor beast.  
When the wind is in the north,  
The old folk should not venture forth.  
When the wind is in the south,  
It blows the bait in the fishes' mouth.  
When the wind is in the west,  
It is of all the winds the best.

An opening and a shetting  
Is a sure sign of a wetting.

(Another version)

Open and shet,  
Sure sign of wet.

(Still another)

It's lighting up to see to rain.

Evening red and morning gray  
Sends the traveler on his way.  
Evening gray and morning red  
Sends the traveler home to bed.

Red sky at morning, the shepherd takes warning;  
Red sky at night is the shepherd's delight.

If the sun goes down cloudy Friday, sure of a clear Sunday.  
If a rooster crows standing on a fence or high place, it will  
clear. If on the ground, it doesn't count.

Between eleven and two  
You can tell what the weather is going to do.

Rain before seven, clear before eleven.

Fog in the morning, bright sunny day.  
If it rains, and the sun is shining at the same time, the devil  
is whipping his wife and it will surely rain to-morrow.  
If it clears off during the night, it will rain again shortly.  
Sun drawing water, sure sign of rain.

A circle round the moon means "storm." As many stars as are in circle, so many days before it will rain.

Sudden heat brings thunder.

A storm that comes against the wind is always a thunder-storm.

The oak and the ash draw lightning. Under the birch, the cedar, and balsam you are safe.

East wind brings rain.

West wind brings clear, bright, cool weather.

North wind brings cold.

South wind brings heat. (On Atlantic coast.)

The rain-crow or cuckoo (both species) is supposed by all hunters to foretell rain when its "Kow, kow, kow" is long and hard.

So, also, the tree-frog cries before rain.

Swallows flying low is a sign of rain; high, of clearing weather.

The rain follows the wind, and the heavy blast is just before the shower.

### Outdoor Proverbs

What weighs an ounce in the morning, weighs a pound at night.

A pint is a pound the whole world round.

Allah reckons not against a man's allotted time the days he spends in the chase.

If there's only one, it isn't a track, it's an accident.

Better safe than sorry.

No smoke without fire.

The bluejay doesn't scream without reason.

The worm don't see nuffin pretty 'bout de robin's song.—  
(Darkey.)

Ducks flying overhead in the woods are generally pointed for water.

If the turtles on a log are dry, they have been there half an hour or more, which means no one has been near to alarm them.

Cobwebs across a hole mean "nothing inside."

Whenever you are trying to be smart, you are going wrong.  
Smart Aleck always comes to grief.

You are safe and winning when you are trying to be kind.

### When Lost in the Woods

If you should miss your way, the first thing to remember is like the Indian, "You are not lost; it is the teepee that is lost."

It isn't serious. It cannot be so, unless you do something foolish.

The first and most natural thing to do is to get on a hill, up a tree, or other high lookout, and seek for some landmark near the camp. You may be so sure of these things:

You are not nearly as far from camp as you think you are.

Your friends will soon find you.

You can help them best by signaling.

The worst thing you can do is to get frightened. The truly dangerous enemy is not the cold or the hunger, so much as the fear. It is fear that robs the wanderer of his judgment and of his limb power; it is fear that turns the passing experience into a final tragedy. Only keep cool and all will be well.

If there is snow on the ground, you can follow your back track.

If you see no landmark, look for the smoke of the fire. Shout from time to time, and wait; for though you have been away for hours it is quite possible you are within earshot of your friends. If you happen to have a gun, fire it off twice in quick succession on your high lookout then wait and listen. Do this several times and wait plenty long enough, perhaps an hour. If this brings no help, send up a distress signal—that is, make two smoke fires by smothering two bright fires with green leaves and rotten wood, and keep them at least fifty feet apart, or the wind will confuse them. Two shots or two smokes are usually understood to mean "I am in trouble." Those in camp on seeing this should send up one smoke, which means "Camp is here."

In a word, "keep cool, make yourself comfortable, leave a record of your travels, and help your friends to find you."

## TRACKING AND TRAILING

From "The Book of Woodcraft," Ernest Thompson Seton, Doubleday, Page & Co.

### The Secrets of the Trail

It was Fenimore Cooper who first put the good Indian on paper—who called the attention of the world to the wonderful woodcraft of these most wonderful savages. It was he who made white men realize how far they had got away from the primitive. It was he who glorified the woodman and his craft.

Yet nowhere do we find in Cooper's novels any attempt to take us out and show us this woodcraft. He is content to stand with us afar off and point it out as something to be worshipped—to point it out and let it die.

Fenimore Cooper has had many imitators, just as Uncas has had many successors. The fine art of trailing is still maintained in the Far West, and it has always seemed strange to me that none has endeavored to give it permanent record, other than superlative adjectives of outside praise.

### Trailing

What is trailing? The fox-hunter has some idea when he sees a superb pack follow a faint scent through a hundred perplexing places, discerning just which way the fox went, and about how long ago. The detective does another kind of trailing when he follows some trifling clue through the world of thought, tracing the secret of an unknown man along an invisible path, running it to earth at last in the very brain that conceived it. In his trailing the Indian uses the senses of the "animal" to aid the brain of the man. To a great extent his eyes do the work of the hound's nose, but the nose is not idle. When the trail disappears, he must do the human detective work; but under all circumstances his brains must be backed by the finest senses, superb physique, and ripe experience, or he cannot hope to overmatch his prey.

### Hard to Photograph Tracks

When, in 1882, I began my dictionary of tracks (see "Life Histories of Northern Animals"), I found that there was no literature on the subject. All facts had to be gathered directly from Nature. My first attempts at recording tracks were made with pencil and paper. Next, realizing how completely the pencil sketch is limited by one's own knowledge, I tried photography; but it invariably happens that not one track in ten thousand is fit for photographing, and it cannot be taken except when the sun is about thirty degrees above the horizon—that is, high enough to make a picture, and low enough to cast a shadow of every detail. Thus photography was possible only for about an hour in the early morning and an hour in the late afternoon. But the opportunity in the meanwhile usually was gone. I then tried making a plaster cast of the tracks in the mud. Only one such in a million was

castable. As a matter of fact, none of the finest were in the mud; and the much more interesting dust-tracks were never within reach of this method. For most practical purposes I have been forced to make my records by drawing the tracks.

### No Two Tracks Alike

The trailer's first task is to learn the trails he means to follow. The Red Indian and the Bushman, of course, simply memorize them from their earliest days, but we find it helpful and much easier to record them in some way. Apart from other considerations, a form is always better comprehended if we reproduce it on paper. As a general principle, no two kinds of animals leave the same track. As a matter of fact, no two individuals leave the same trail. Just as surely as there are differences in size and disposition, so there will be corresponding differences in its trail; but this is refining beyond the purposes of practicability in most cases, and for the present we may be satisfied to consider it a general rule that each species leaves its own clearly recognizable track. One of my daily pastimes when the snow is on the ground—which is the easiest and ideal time for the trailer, and especially for the beginner—is to take up some trail early in the morning and follow it over hill and dale, carefully noting any change and every action as written in the snow, and it is a wonderfully rewarding way of learning the methods and life of an animal. The trail records with perfect truthfulness everything that he did or tried to do at a time when he was unembarrassed by the nearness of his worst enemy. The trail is an autobiographic chapter of the creature's life, written unwittingly, indeed, and in perfect sincerity.

Whenever in America during the winter I have found myself with time to pass between trains, I endeavor to get out into the country, and rarely fail to find and read one of these more or less rewarding chapters, and thus get an insight into the life of the animal, as well as into the kinds that are about; for most quadrupeds are nocturnal, and their presence is generally unsuspected by those who do not know how to read the secrets of the trail.

### Dog and Cat

The first trails to catch the eye and the best for first study are those nearest home. Two well-marked types are the tracks

of cat and dog. Most anatomists select the cat as the ideal of muscular and bony structure. It is the perfect animal, and its track also is a good one to use for standard.

In these separate prints the roundness of the toe-pads tells the softness; their spread from each other shows the suppleness of the toes; the absence of claw-marks tells of the retractability of these weapons. The front and hind feet are equal in length, but the front feet are broader. This is the rule among true quadrupeds. The series of tracks—that is, its trail—shows the manner of the cat in walking. In this the animal used apparently but two legs, because the hind foot falls exactly on the trail made by the front foot, each track being really doubled. This is perfect tracking. There are several advantages in it. Every teamster knows that a wagon whose hind wheels do not exactly follow the front wheels is a very bad wagon to haul in sand, snow, or mud. The trail for it has to be broken twice, and the labor increased, some say, 50 per cent. This same principle holds good in the case of the cat track; by correct following the animal moves more easily. But there is still a more important reason. A hunting cat sneaking through the woods after prey must keep its eyes on the woods ahead or on the prey itself. At the very most it may pick out a smooth, safe, silent place for its front feet to tread on. Especially at the climax of the hunt all its senses are focussed on the intended victim; it cannot select a safe spot for each hind foot in turn, even though the faintest crunch of a dry leaf will surely spoil the stalk. But there is no danger of that; the cat can see the spots selected for the front feet, and the hind feet are so perfectly trained that they seek unerringly the very same spots—the safe places that the front feet have just left. Thus perfect stepping is silent stepping, and is essential to all creatures that stalk their prey. The opposite kind of stepping is seen in very heavy animals which frequent marshy ground; to them it would be a positive disadvantage to set the hind foot in the tread of the front foot, where so much of the support has just been destroyed. The ox illustrates this. These principles are applicable in geology, where the trails are the only biographical records of certain species. From the manner of setting the feet we can distinguish the predacious and the marsh-frequenting quadrupeds.

The next track like to be seen is that of the dog. In this the harder, less pliant foot and the non-retractile claws are clearly seen. But the trail shows the dog is not a correct walker. His tracks are "out of register" as a printer

would say. And he has a glaring defect—the result no doubt of domestication, of long generations on pavements and in houses—he drags his toes. All these things contribute to make the dog a noisy walker in the woods.

### Wolf

It is well at this time to compare the track of the dog with that of the wolf. I have made dozens of drawings, casts, prints, photographs, and studies of wolf and dog tracks; and have not found a single reliable feature that will distinguish them. One hunter says the wolf has the relatively small outer toes. Yes, sometimes; but not when compared with a collie. Another says that the wolf's foot is longer; but not when compared with that of a greyhound, staghound, or lurcher. Another, the wolf's foot is larger; yet it will not rank in size with that of a St. Bernard or a Great Dane. The wolf lifts his feet neatly without dragging his toes; but so do many dogs, especially country dogs. Thus all these diagnostics fail. On the whole a wolf is a better walker than a dog. His tracks do usually register, but not always, and in some wolves rarely.

If a wolf-track in the snow be followed for a mile or two, it will be found to go cautiously up to an unusual or promising object. It is obviously the trail of a suspicious, shy creature while the dog-trail is direct, and usually unafraid. But this does not apply to the dogs which poach or kill sheep. There is therefore no sure means of distinguishing them, even in the wilderness. One can only judge by probabilities.

I have often heard inexperienced hunters boast that they could "tell them every time"; but old hunters usually say, "No man can tell for sure."

### Rabbits and Hares

America is well provided with rabbits and hares. A score or more of species are now recognized, and two very well-known types are the cottontail of the woods and the jack-rabbit of the plains.

The cottontail is much like an English rabbit, but it is a little smaller, has shorter ears, and the whole under part of the tail is glorified into a fluffy, snowy powder-puff. It leads the life of a hare, not making burrows, but entering burrows at times under the stress of danger. The track of a New England cottontail is given in Illustration 1.

As the cottontail bounds, the hind feet track ahead of the front feet, and the faster he goes the faster ahead his hind feet get. This is true of all quadrupeds that bound, but is more obvious in the rabbits, because the fore and hind feet differ so much in size.

The jack-rabbit of Kansas is the best known of the long-eared jacks. His trail, compared with that of the cottontail, would be as in Illustrations 2 and 3.

The greater size of the marks and the double length of the bounds are the obvious but not important differences, because a young jack would come down to the cottontail standard. The two reliable differences I found are:

First, the jack's feet are rarely paired when he is bounding at full speed, while the cottontail pairs his hind feet but not his front ones. (Animals which climb usually pair their front feet in running, just as tree-birds hop when on the ground.)

Second, the stroke that is shown (x in Illustration 2) is diagnostic of the southern jack-rabbit; it is the mark made by the long hanging tail.

Each of the four types of hare common in the temperate parts of America has its own style of tail and fashion of wearing it:

The northern or white-tailed jack carries his snowy-white tail out straight behind, so its general pure-white is visible;

The southern or black-tailed jack has his tail jet-black on the upper part, and he carries it straight down;

The varying hare has an inconsequent, upturned tuft, like a tear in his brown pantaloons, showing the white undergarment;

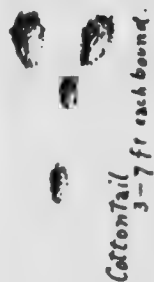
The cottontail has his latter end brown above, but he keeps it curled up tight on his back, so as to show nothing but the gleaming white puff of cotton on a helpful background of rich brown. The cottontail's tail never touches the ground except when he sits down on it.

The most variable features of any animal are always its most specialized features. The jack-rabbit's tail-piece is much subject to variation, and the length and depth of the little intertrack-ial dash that it makes in the snow is a better guide to the individual that made it than would be the tracks of all four feet together.

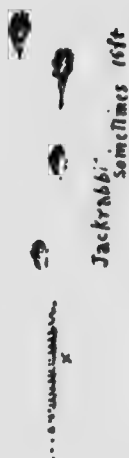
### Fox

Of more general interest perhaps is the track of the fox. I have spent many days—yes, and nights—on the trail,

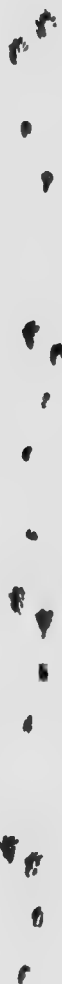




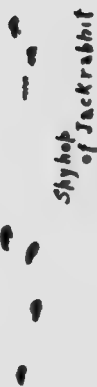
No. 1 Cottontail



No. 2 Jack-rabbit



No. 3



No. 4

of the  
d feet  
more  
fer so

long-  
ontail,

of the  
ecause  
ndard.

unding  
ut not  
r front  
d.)

2) is  
ade by

perate  
wearing

y-white  
le;  
t-black

ift, like  
arment;  
e keeps  
but the  
of rich  
except

ays its  
is much  
he little  
er guide  
ks of all

the fox.  
he trail,

following, following patiently, reading this life of the beast, using notebook at every important march and change. Many an odd new sign has turned up to be put on record and explained by later experience. Many a day has passed with nothing tangible in the way of reward; then, as in all hunting, there has come a streak of luck, a shower of facts and abundant reward for the barren weeks gone by, an insight into animal ways and mind that could not have been obtained in any other way. For here it is written down by the animal itself in the oldest of all writing—a chapter of the creature's normal life.

One day, soon after the snow had come, I set out on one of the long decipherments. The day before I had followed a fox-trail for three or four miles, to learn only that he tacked up wind and smelled at every log, bump, and tree that stuck through the snow; that he had followed a white hare at full speed, but was easily left behind when the hare got into his ancient safety—the scrubby, brushy woods.

This morning I took up another fox-trail. The frost was intense, the snow was dry and powdery and as each foot was raised it fell back; so that the track was merely shapeless dimples in the whiteness. No tell-tale details of toes and claws were there, but still I knew it for a fox-trail. It was too small for a coyote. There were but two others that might have been confounded with it; one a very large house-cat, the other a very small house-dog.

The fox has the supple paw of the cat. It spreads even more, but it shows the long, intractile claws. As a stepper the fox ranks close to the cat. His trail is noted also for its narrowness—that is, the feet are set nearly in one straight line. This in a trail usually means a swift animal; while the badly spread marks, seen at a maximum in the badger, stand for great but sluggish strength.

The region put the cat out of the reckoning. Besides, at one or two places the paw had grazed the snow, showing two long furrows, the marks of claws that do not sheathe: dog-marks, perhaps, but never a cat's. The marks were aligned like a cat's, but were fourteen inches apart, while it is rare for a cat to step more than ten.

They were not dog-marks: first, the probabilities were against it; second, the marks were nearly in a line, showing a chest too narrow for a dog. Then the toes did not drag, though there was four inches of snow. The register could not be distinguished but there was one feature that settled all doubt—the big, soft, shallow marks of the fox's brush, sometimes sweeping the snow

at every yard, sometimes not at all for fifty steps, and telling me with certainty, founded in part on the other things—"This is the trail of a fox."

Which way is he going? is the next question, not easy to answer when the toe-marks do not show; but this is settled by the faint claw-marks already noted. If still in doubt, I can follow till the fox chances on some place under a thick tree or on ice where there is very little snow, and here a distinct impression may be found.

### The Fox's Hunt

For a mile or two I followed my fox. Nothing happened. I got only the thought that his life was largely made up of nose investigation and unfavorable reports from the committee in charge. Then we came to a long, sloping hollow. The fox trotted down this, and near its lower end he got a nose report of importance for he had swung to the right and gone slowly—so said the short steps—zigzagging up the wind. Within fifteen feet, the tacks in the course shortened from four or five feet to nothing, and ended in a small hole in a bank. From this the fox had pulled out a common, harm'less garter snake, torpid, curled up there doubtless to sleep away the winter. The fox chopped the snake across the spine with his powerful meat-cutters, killed it thus, dropped it on the snow, and then, without eating a morsel of it as far as I could see, he went on with his hunt. (Illustration 5 A.)

Why he should kill a creature that he could not eat I could not understand. I thought that ferocious sort of vice was limited to man and weasels, but clearly the fox was guilty of the human crime.

The dotted guide led me now, with many halts and devious turns, across a great marsh that had doubtless furnished many a fattened mouse in other days, but now the snow and ice forbade the hunt. On the far end the country was open in places, with clumps of timber, and into this, from the open marsh, had blown a great bank of soft and drifted snow.

Manitoban winters are not noted for their smiling geniality or profusion of outdoor flowers. Frost and snow are sure to come early and continue till spring. The thermometer may be for weeks about zero point. It may on occasion dip down to thirty, yes, even forty, degrees below, and whenever with that cold there also comes a gale of wind, it conjures up the awful tempest of the snow that is now of world-wide fame as—the

blizzard. The blizzard is a terror to wild life out on the plains. When it comes the biggest, strongest, best clad, rush for shelter. They know that to face it means death. The prairie chickens or grouse have learned the lesson long ago. What shelter can they seek? There is only one—an Eskimo shelter—a snow house. They can hide in the shelter of the snow.



No. 5. The record of the fox's hunt

As the night comes, with the fearful frost and driving clouds of white, the chickens dive into a snowdrift; not on the open plain, for there the snow is hammered hard by the wind, but on the edge of the woods, where tall grass spears or scattering twigs stick up through and keep the snow from packing. Deep in this the chickens dive, each making a place for itself. The wind wipes out all traces, levels off each hole and hides them well. There they remain till morning, warm and safe, unless—and here is the chief danger—some wild animal comes by during

the night, finds them in there, and seizes them before they can escape.

This chapter of grouse history was an old story to the fox and coming near the woodland edge, his shortened steps showed that he knew it for a Land of Promise. (Illustration 11 B.)

At C he came to a sudden stop. Some wireless message on the wind had warned him of game at hand. He paused here with foot upraised. I knew it, for there was his record of the act. The little mark there was not a track, but the paw-tip's mark, showing that the fox had not set the foot down, but held it poised in a pointer-dog pose, as his nose was harkening to the tell-tale wind.

Then from C to D he went slowly, because the steps were so short, and now he paused: the promising scent was lost. He stood in doubt, so said the tell-tale snow in the only universal tongue. Then the hunter turned and slowly worked toward E, while frequent broad touches in the snow continued to guarantee that the maker of these tracks was neither dog nor spindle-tailed.

From E to F the shortened steps, with frequent marks of pause and pose, showed how the scent was warming—how well the fox knew some good thing was near.

At F he stood still for some time with both feet set down in the snow, so it was written. Now was the critical time, and straight up the redolent wind he went, following his nose, cautiously and silently as possible, realizing that now a single heedless step might spoil the hunt.

### Closing In

At G were the deeply imprinted marks of both hind feet, showing where the fox sprang just at the moment when, from the spotless snowdrift just ahead, there broke out two grouse that had been slumbering below. Away they went with a whirr, whirr, fast as wing could bear them; but one was just a foot too slow; the springing fox secured him in the air. At H he landed with him on the prairie, and had a meal that is a fox's ideal in time of plenty; and now, in deep hard winter, it must have been a banquet of delight.

Now, for the first time, I saw the meaning of the dead garter snake far back on the trail. Snake at no time is nice eating, and cold snake on a cold day must be a mighty cold meal. Clearly the fox thought so. He would rather take a chance of getting something better. He killed the snake; so it could

not get away. It was not likely any one would steal from him that unfragrant carcass, so he would come back and get it later if he must.

But as we see, he did not have to do so. His faith and patience were amply justified. Instead of a cold, unpleasant snake, he fed on a fine hot bird.



1. Tracks of old man.
2. " " a young hunter.
3. " " a city woman.
4. " " dog.
5. " " cat.

Thus I got a long, autobiographical chapter of fox-life by simply following his tracks through the snow. I never once saw the fox himself that made it, and yet I know—and you know—it to be true as I have told it.



Deer



Sheep



Pig

## Books Recommended

THE LIFE HISTORIES OF NORTHERN ANIMALS. Two large volumes by Ernest Thompson Seton, dealing with habits of animals, and giving tracks of nearly all. Scribners, 1909.

MAMMALS OF THE ADIRONDACKS, by C. Hart Merriam, M. D. Henry Holt & Co., New York City. Price \$2.00

## Keeping Up the Old Trails

There is always great cause for regret when an old road with all its historical interest is abandoned.

It was undoubtedly a sad blunder in the Canadian government when it allowed the Old Cart Trail from Winnipeg to Edmonton (800 miles) and the similar trails to Calgary and Prince Albert to be closed by fences so that the travelling public now pursues a rectangular course, climbing over hills and floundering through bogs instead of taking the path selected by the pioneers for its easy grades and directness of line.

The authorities now begin to realize the magnitude of their blunder when it is too late.

In the United States the old Allegheny Crossings and the Overland routes are being made into national highways without regard to rectangular survey, guided by an accurate study of natural obstacles as they were in the beginning.

In other localities a similar care is manifesting itself in restoration and perpetuation of the Old *Moccasin Trails* which are of singular value not only to the historian but to the pedestrian, for they are not only the shortest lines between points but always the most beautiful. In some cases the road was selected in order to go from one noble landscape to another.

Such roadways are cheap to make and valuable to every one from the passing lover of scenery to the Forest Ranger on his daily round.

The Green Mountain Club (President Will F. Monroe) is doing noble work along this line and should receive the support of every Woodcrafter.

It is not too much to say that every famous highway in America to-day was, at first, only a moccasin trail through the woods, and that the engineers are indebted to that fact. The Boston Post Road, the Cumberland Gap, the Monterey Drive, Raton Pass all bear testimony of the ancient trail-maker.

By all means, then, let us save the Old Moccasin Trails, even if it be only by recording their lines so that a wiser generation may undertake the restoration.



In England they have long had a powerful society pledged to preserve the old footways, a society which has done noble necessary service, and we should long ago have had such an organization here to do the same or similar sort of work.

Let us not neglect this work but as lovers of the woods class with forest and bird protection the Keeping of the Old Trails that it will be easier to follow the streams and to enjoy the birds and flowers of woodland and hill.

### The Value of Doing

Our grandfathers alone in the wilderness, were sufficient unto themselves, for they were true Woodcrafters—they mastered the things about them. Conditions have changed, and now most of these things have been taken from the home to the factory, so the old home training is no longer in reach.

The big value of all this knowledge was in that it bestowed power. For learning to do gives more power to do, and when you let some one else do a thing for you, you eventually lose the power to do that thing. Through the ability to do have peoples prospered and nations become great.

When the Romans put in the hands of slaves the doing of everything, they thereby lost the power to do, and were defeated by themselves in their national life and then by their enemies in battle. The Vikings sailed their ships fearlessly and far, for they had proved themselves on many seas. In time of stress, each leader took the helm of his own ship; and the proud boast often heard among these world-subduing northern folk was: "I am a noble. My father owns his own forge." Always in the world's history, those who valued the ability to do have been strong and sturdy. The Persians' battle flag in their strongest time was a blacksmith's apron. Emerson recognized the value of doing things well when he said: "If a man can write a better book, preach a better sermon, or make a better mousetrap than his neighbor, though he live in the woods, the world will make a beaten path to his doorway."

So the Woodcraft Boy of to-day will learn to do, if he would be happy and healthful; for life is made worth while, not by the few great moments, but by the making of the daily life pleasant and full of meaning. The difference in lives is largely in what one knows and can do. One is of value in the office from this standpoint.

Probably nothing is sadder than to go into a home where everything is bought ready prepared; clothing ready made, food



bought in small quantities at a delicatessen shop, amusement had at the movies or at some place where it can be bought. The clothing is commonplace—no brain or pride has gone into the making; the food was bought in a hurry and haphazardly. The amusements are often flat, and mostly superficial.

Oh, Woodcraft Boy, would you really live? Then begin, not by dreaming of some new field to enter or new worlds to conquer, but by knowing and using all the things about you. Know the pleasure of workmanship, the joy that comes from things made well by your own hands, the happiness which comes from closer touch with the fundamental things of life and the consciousness of being of value to the world.

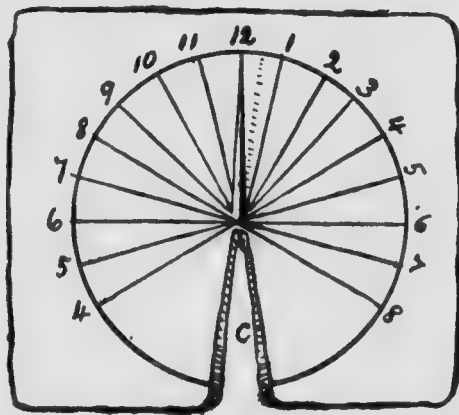
## Indian Tweezers

Oftentimes a camper may need a pair of tweezers or forceps to pull out a thorn or catch some fine end. If he happens to be without the real thing, he can supply the place with those of Indian style—these are simply a small pair of clam-shells, with edges clean and hinge unbroken.

The old-time Indians had occasionally a straggly beard. They had no razor, but they managed to do without one. As a part of their toilet for special occasion they pulled out each hair by means of the clam shell nippers.

## An Indian Clock, Shadow Clock, or Sundial

To make an Indian shadow clock, or sundial, prepare a smooth board about fifteen inches across, with a circle divided by twenty-four rays into equal parts. Place it on a level, solid post or stump in the open. At night set the dial so that the twelve o'clock line points exactly north, as determined by the Pole Star and nail it down. Then, fix a stick or pointer with its



upper edge on the centre and set it exactly pointing to the Pole Star (a b); that is, the same angle as the latitude of the place, and fix it there immovably; it may be necessary to cut a notch (c) in the board to permit of a sight line. The hours eight at night to four next morning may as well be painted black. As a time-piece, this shadow clock will be found roughly correct.\* The Indians of course used merely the shadow of a tree, or the sun streak that fell on the lodge floor through the smoke opening.

### The Watch as a Compass

In case one desires to locate north and has no compass, a watch may be used.

Point the hour hand to the sun. In the morning, halfway between the outside end of the hour hand and noon is due south; in the afternoon, one must reckon halfway backward; for instance, at 8 A. M., point the hour hand to the sun and find the place halfway to noon. It will be at 10, which is due south. At 4 o'clock, point the hour hand at the sun and reckon halfway, and the south will be found at 2 o'clock.

The reason "halfway" is used, is that, while the sun makes a course of 24 hours, the clock makes a course every 12 hours. If our timepieces were rational and had a face showing 24 hours, the hour hand pointed to the sun would make 12 o'clock, noon, always south.

If the sun is clouded and you cannot see it, get into a clear open space. Hold your knife point upright on the watch dial, and it will, unless the clouds are very heavy, cast a faint shadow, showing where the sun really is.

### A Home-made Compass

If you happen to have a magnet, it is easy to make a compass. Rub a fine needle on the magnet; then on the side of your nose. Then lay it gently on the surface of a cup full of water. The needle will float and point north. The cup must not be of metal.

### Lights

For camp use, there is nothing better than the Stonebridge folding lantern, with a good supply of candles. A temporary

---

\*To make a more scientifically accurate Sundial, see Collins' "Book of the Stars," p. 42.

torch can readily be made of a roll of birch bark, a pine knot, or some pine-root slivers, in a split stick of green wood.

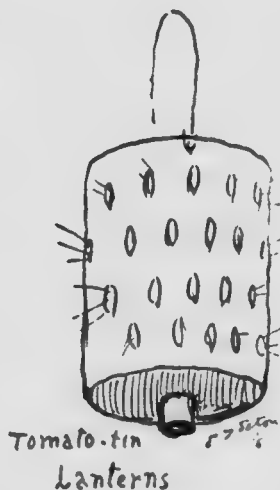
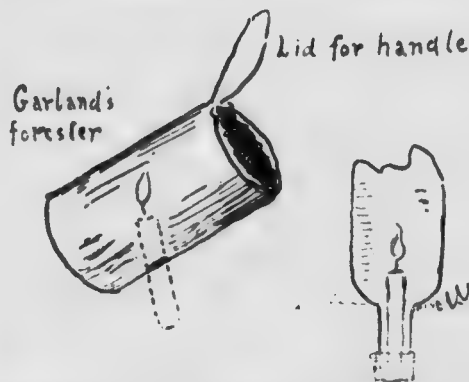
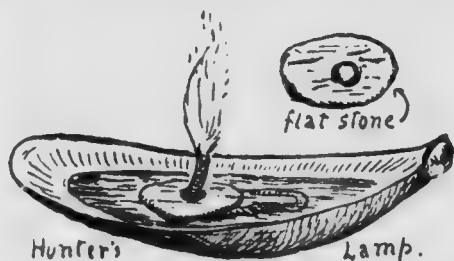
### Hunter's Lamp

A fairly steady light can be made of a piece of cotton cloth or twisted rag stuck in a clam shell full of oil or melted grease. An improvement is easily made by putting the cotton wick through a hole in a thin, flat stone, which sets in the grease and holds the wick upright.

Another improvement is made by using a tin in place of the shell. It makes a steadier lamp, as well as a much larger light. This kind of a lamp enjoys wide use and has some queer names, such as slot-lamp, grease-jet, hunter's lamp, etc. (See cut below.)

### Woodman's Lantern

When nothing better is at hand, a woodman's lantern can be made of a tomato can. Make a big hole in the bottom for



the candle, and punch the sides full of small holes, preferably from the inside. If you have a wire to make a hanger, well and good; if not, you can carry it by the bottom. This

lets out enough light and will not go out in the wind. If you want to set it down, you must make a hole in the ground for the candle, or if on a table, set it on two blocks. (Cut on page 219.)

Another style is described in a recent letter from Hamlin Garland:

"Apropos of improved camp lights, I had a new one 'sprung on me,' this summer: A forest ranger and I were visiting a miner, about a mile from our camp. It came on dark, pitch dark, and when we started home, we could not follow the trail. It was windy as well as dark, and matches did very little good. So back we went to the cabin. The ranger then picked up an old tomato can, punched a hole in the side, thrust a candle up through the hole, lighted it, and took the can by the disk which had been cut from the top. The whole thing was now a boxed light, shining ahead like a searchlight, and the wind did not affect it at all! I've been camping, as you know, for thirty years, but this little trick was new to me. Perhaps it is new to you." H. G.

Still another style, giving a better light, is made by heating an ordinary clear glass quart bottle pretty hot in the fire, then dipping the bottom part in cold water; this causes the bottom to crack off. The candle is placed in the neck, flame inside, and the bottle neck sunk in the ground.

### Knife and Hatchet or Whittling and Chopping

If I were marooned on an island or left alone in the wilderness, and had the choice of but one weapon to take along, I should take a good knife. If I were allowed two, the second would be a hatchet.

With these two one can make most of the things needed for securing food or building shelters.

The Northern Indians are probably the best whittlers in the world. They use a curious curved knife called the crooked knife. It is made of an old file curled up at the point so it can cut a narrow groove. With such a knife a Chipewyan Indian can make bow, arrows, traps, snowshoes, canoe, and wigwam—as well as clothing, his whole outfit complete; a good crooked knife, therefore, is a fair start in life for an industrious Indian.

### Rules for Using a Knife

In whittling, *always assume that the knife is going to slip*, therefore, arrange so it can do no damage when it does slip.

For this reason, it is usual to make a beginner whittle *away from himself*, but that is not always safe. Indeed, all the best whittlers in the world, including Northern Indians, Farriers, Wagonmakers, etc., whittle *toward themselves*, with the hand held palm up, the knife blade at the little finger side, using the pull of the arm instead of the push, thereby getting more power and better control. But this is sure, you should *never whittle toward the hand* that is holding the wood.

Always keep your knife sharp. It is a sign of a tenderfoot to have a dull knife, and of a trained Woodcrafter to have a keen one.

To keep a knife sharp, it must be a good piece of steel and you must know how to sharpen it. The only way to get a good blade is to go to a good maker and pay a good price. The fancy knives that are corkscrew, toolchest, bootjack, and whistle all combined, are seldom of good steel.

Old-timers prefer a *white*-handled knife as it is more readily found if dropped on the ground or in the water.

The blade cannot be kept in good condition if used for anything but a wood cutter. Therefore, do not cut nails, metal, or softwood knots (especially hemlock knots) with it.

Never stick the blade in the fire. That would draw the temper and spoil the knife.

Do not abuse your knife by using it for a hammer, wedge, screwdriver, or pry.

Carry a little whetstone or else a small file to keep your knife in good shape.

A pocket or shut-up knife is the only style worth carrying. The hunting knife or dagger has not enough use to-day to make it worth while.

It is a proof of a good whittler if one can make half a dozen firelighters in succession. A firelighter or fuzz-stick (see illustration) is a stick of soft wood about an inch thick or six or eight inches through, shaved into thin slivers which are still on the stick; that is, are one solid piece at one end and all thin slivers at the other. This can only be done if you have a sharp, strong knife, a well-selected piece of soft wood without knots in it, and a steady hand. Provided the wood is good, the firelighter is perfect if not a sliver is loose or drops off.

## Use of Hatchet

A good camper is known by his hatchet; if it is always sharp, and kept muzzled when travelling, the owner knows his business.

Most of the knife rules apply equally to the hatchet.

Never try to break a stone with a hatchet or let the hatchet be driven into a log by striking its back with another hatchet or anything of metal; use a wooden maul if it is necessary to drive the hatchet, as in splitting a stick.

If you are going to hew a piece of timber with a hatchet, always draw a line first to guide you.

If you are going to point a stake, make it a four-sided point, cutting sides No. 1 and No. 3, No. 2 and No. 4; so that finally at any cross-section of the point it will be square.

It is a sure sign of inexperience when a camper throws his hatchet at trees, etc., to see if he can make it stick. Broken blades, broken handles, and injured trees are the inevitable result, with the large possibility of serious accident.

### Use of the Axe

The hatchet has long been the emblem of George Washington, in allusion to the incident of the cherry tree. So also the axe has become an emblem of Abraham Lincoln, the backwoodsman, the railsplitter, the typical American, who used the axe to carve his home out of the wilderness.

I think that the axe might well be the emblem of America, for it was composed originally of the finest metal that Europe could supply, combined with a handle of the finest, toughest stuff that America could grow; and thus became the best weapon ever wielded by man for subduing the wilderness.

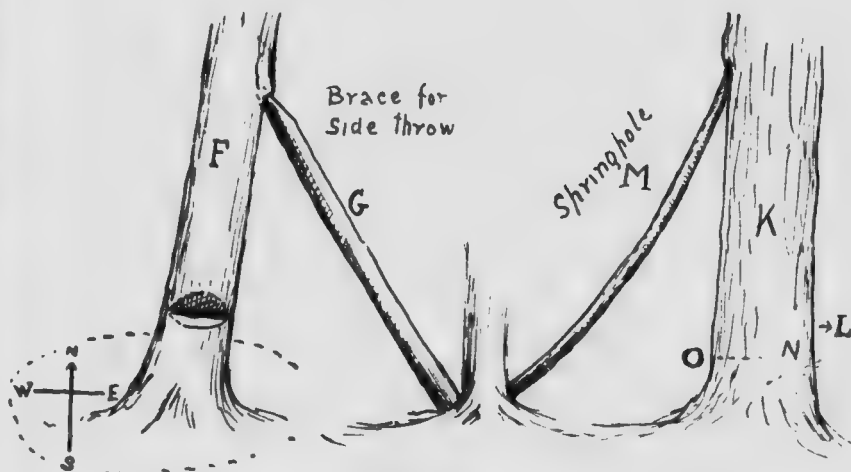
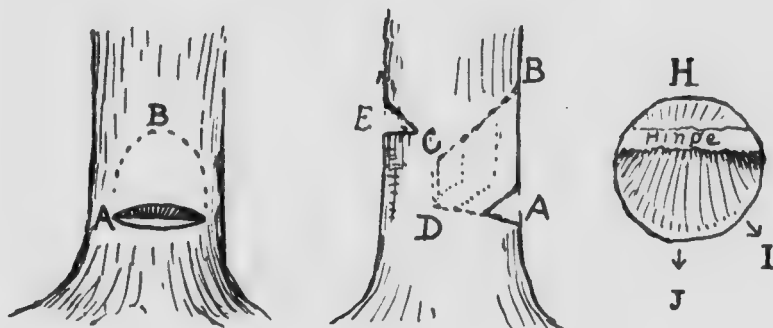
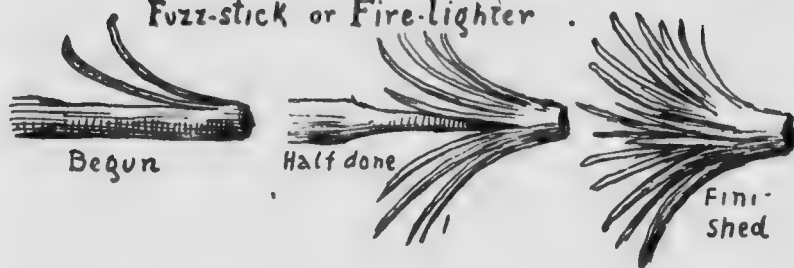
Most of the instructions for use of the hatchet apply equally to the axe; but the axe chiefly is used for cutting down trees and cutting up logs.

To cut down a large tree with an axe, first clear a space around so you have firm footing and no limbs are left to catch the axe as it swings. Now begin by cutting the notch A (see illustration) at a convenient height, on the side to which you would throw the tree.

Then split out the big chips B A by strokes at B. Continue the operation until you reach C D. Then stop and cut in the notch E. Resume cutting at C D until the tree falls.

The notch E is never made on the level with D or lower, because then the butt of the tree might shoot backward as the tree falls and kill the woodsman; also, the upright part left standing between E and D prevents the tree falling the wrong way. When it matters little which way the tree goes, the notch is made much lower.

Fozz-stick or Fire-lighter .



Whittling and Chopping

If the tree leans much the wrong way, you can push it over by guide or spring poles. Thus the tree F is leaning to the east, but a strong brace planted at G will make it fall to the south, if you cut the tree chiefly on the south side and leave the last uncut fibres of wood to run east and west, so they act as a hinge.

This hinge is very important at times. In the section H the tree may be inclined to fall toward I, but it is easiest to bend the hinge at right angles to its main length so the angle of the hinge will throw it toward J, if there is no wind and the tree does not lean too much.

Another well-known device is the spring pole. To make sure of the tree K falling toward L, put in a spring pole M, as long and as heavy as you can manage, force it in and have it bent down so that it is pushing against the tree. In some cases, several of these poles are put in. Two are, of course, twice as powerful as one, and when the tree is cut at the L side, the poles push it that way.

These were very familiar woodsman's tricks in my young days, but they are now largely displaced by the saw. The plan being to notch the tree at N, then saw it in at O until large iron wedges may be driven in behind the saw as it sinks into the trunk, and the tree is inevitably thrown toward N, usually in a line at right angles to the cut of the saw.

A clever woodsman can throw a tree so exactly where he wants it that he can make it drive a given stake.

A good axeman can fell a six-inch tree in a minute.

When one is cutting a sapling, it helps greatly if the tree be bent over, then one blow of the axe on the bulge of the bend will usually cut it off, whereas a dozen might be needed if the tree were not pulled over first.

To cut a large log on the ground, the axeman stands on it and cuts between his wide-spread feet; cutting half through each side and keeping the kerfs or cuts plumb, P Q (see illustration). If it were cut through entirely from one side as at R, the labor would be double, because fully twice as much wood must then be removed.

For a small log, it is easier to stand on the ground and cut more nearly on the upper side till halfway through, then roll the log half over and make the other cut.

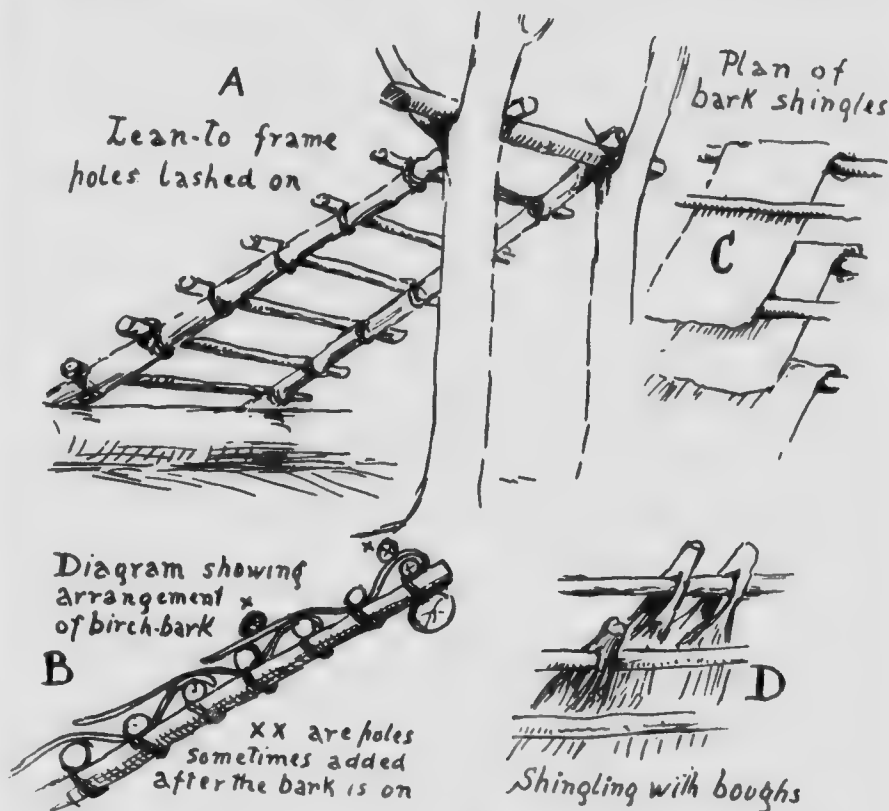
### A Waterproof Shelter of Wilderness Stuff

If you have plenty of spruce, balsam, or hemlock boughs available to furnish a roof thatch, it is easy to make a lean-to. This



consists of a frame of poles bound with roots of spruce or tamarac, or else the inner bark of the elm, tamarac, leatherwood, or pignut hickory. (See A in illustration.)

Begin at the bottom and cover them with the boughs cut twenty or thirty inches long and each one attached to the poles at D in the illustration.



If you chance to have an abundance of birch bark, it is yet simpler. Cut the birch bark as large as possible and insert a row of sheets at the bottom, brown side up, overlapping at the up-and-down joints instead of setting the bark pieces side by side as in shingling. The top row may need extra binding poles to hold the bark sheets down (XX in B). These poles are bound at their ends to the ends of the poles below them.

If grass or rushes are used, tie it in bundles and put on as with boughs. Sometimes the grass bundles are lashed separately to the upper sides of the poles with root or bark bindings.

If one happens to have a supply of clay handy, a first-class clay

roof can be made. Make the structure very strong with cross poles so close side by side that they touch each other. On them lay a few inches of grass, and cover all with the clay hammered smooth.

In each case, the ends may be filled up with the same material as the roof.

A fire in front makes of it a very comfortable dwelling.

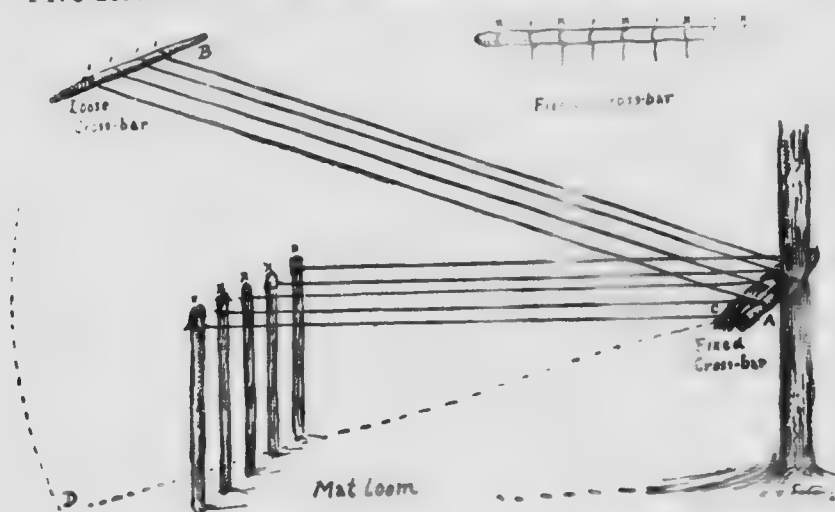
In rough, hasty work, the lashing of the poles is dispensed with; the poles being held in place by knots left projecting on the two main end supports. This arrangement for the clay or the bough roof, but will not do for birch bark or other shingling.

### Camp Loom and Grass Mats

The chief use of the camp loom is to weave mats for the beds of grass, straw, hay, or, best of all, sedge. I have made it thus:

A 3-foot cross-bar A is fast to a small tree, and seven feet away even stakes are driven into the ground 8 inches apart each 3 feet out of the ground.

Five stout cords are tied to each stick, and to the cross-bar,



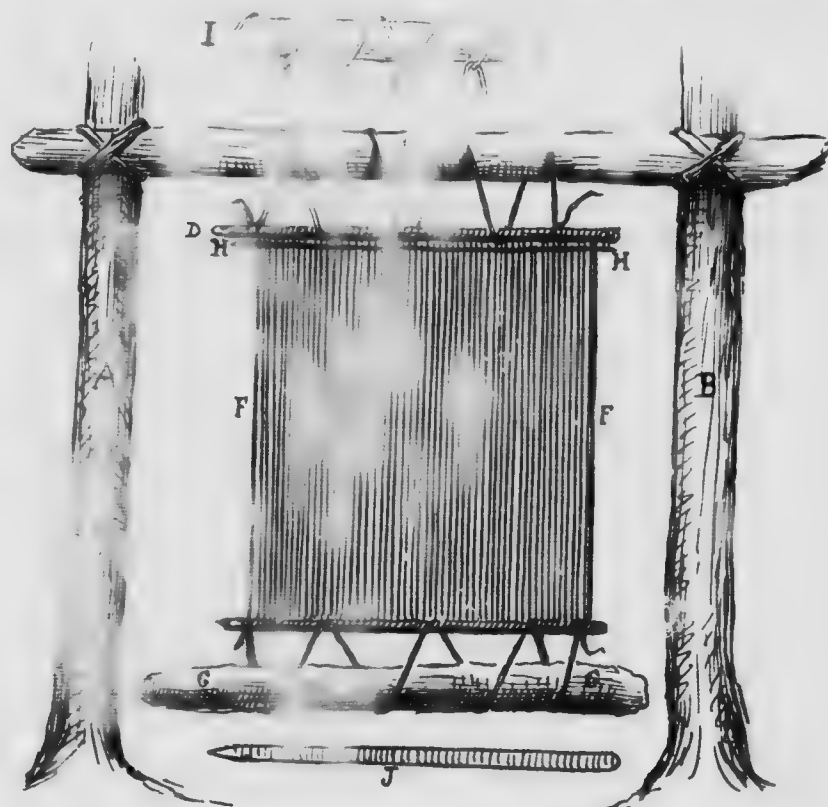
keeping them parallel. Then, between each on the cross-bar, is attached another cord (four in all) the far end of which is made fast to a loose cross-bar, B.

One person raises the loose cross bar B, while another lays a long bundle of grass tight in the corner C. The B is lowered to D, and another roll of grass or sedge is tucked in the side of the stake cords. Then the bundles are laid on the

and one below until the mat is of the required length. The cords are then loosened, the cross bars removed, and the mat when dried, makes a fine bed. What is added to the willow bed, is pure luxury; but lawful because it is made of wildwood material.

### Wavajo Loom

A profitable amusement in camp is weaving rugs or mats of inner bark, etc., on a rough loom. The crudest kind of one which can be made in an hour, is illustrated below. It has been found to be quite satisfactory for weaving rough mats or rugs. A and B are two trees or posts. C is the cross piece. D is the upper yarn-beam, wrapped its



length with a spiral cord. E is the lower yarn-beam, sin y wrapped. F F are stout cords to carry the frame the warp is being stretched between the yarn-beams. is a log hung on for weight. HH is a round stick fast-

ened between the yarns, odds on one side, evens on the other, to hold the yarns open until the rug is all done, but about one inch when it is drawn out.

Now, with a needle, the yarns or strings for the warp are stretched from one yarn-beam to another, as a continuous string. The exact method is shown on a larger scale in the upper figure I I. The batten or spreader J is a piece of light wood two inches wide and one half inch thick, with square edges, but thin, sharp point, and about as long as the yarn-beam.

Now, we are ready to begin. Run the batten between the yarns under the sticks H H. Then drop it to the bottom and turn it flatwise, thus spreading the yarns apart in two rows. Lay a line of soft bark, rags, or other woof in this opening on top of the batten, making sure that it projects a couple of inches at each end. Double these long ends around the strong cords FF then back along themselves. Now draw out the spreading batten and press the woof down tight.

Run the batten through alternate threads again, but the reverse way of last, and this time it goes more slowly for the lack of a guide rod.\* Lay a new line of woof as above. When the rug is all finished, except the top inch or more, draw out the rod H H and fill the warp to the top.

Finally cut and draw out the spiral cords on each yarn-beam. This frees the rug, which is finished, excepting for trim and binding, when such are desired.

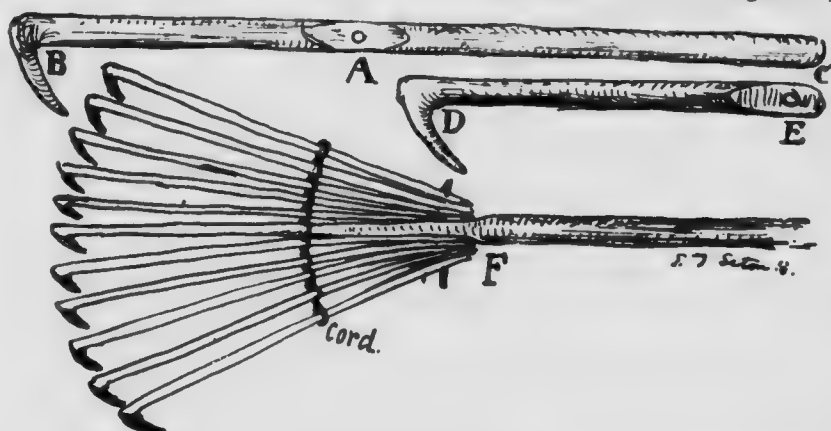
Those who want full details of the best Navajo looms and methods will find them in Dr. Washington Matthew's article on Navajo Weavers, 3d Annual Report, Bur. of Ethnology, 1881-2. Washington, 1884.

### Camp Rake

A camp rake is made of forked branches of oak, beech, hickory, or other hard wood, thus: Cut a handle an inch thick B C and 4 feet long, of the shape shown. Flatten it on each side of A, and make a gimlet-hole through. Now cut ten branches of the shape D E, each about 20 inches long. Flatten them at the E end, and make a gimlet-hole through each. Fasten all together,

\*This is done much more quickly by help of a heald-rod, that is, a horizontal stick as wide as the blanket, with every other strand of the warp loosely looped to it by a running cord near the top. When this rod is pulled forward it reverses the set of the threads and allows the batten to drop in at once.

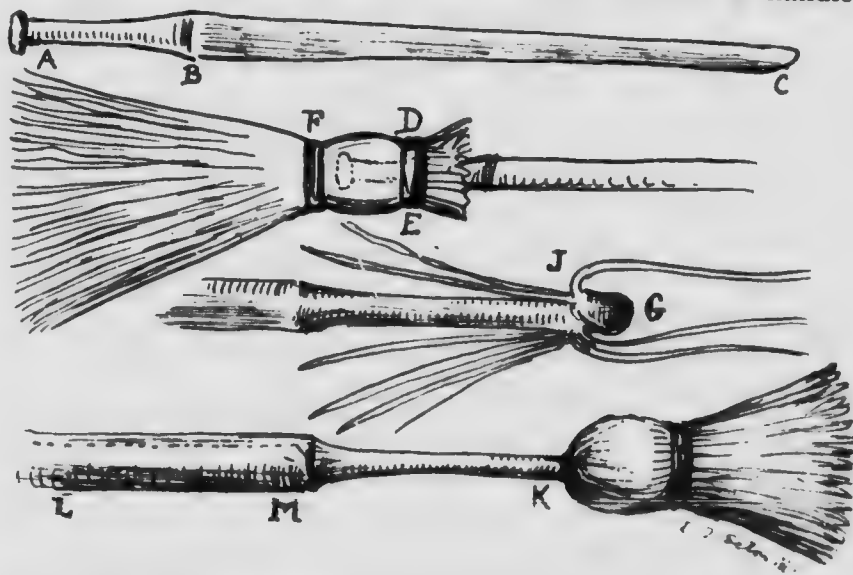
five on each side of the handle, as in F, with a long nail or strong wire through all the holes; then, with a cord, lash them together,



spacing them by putting the cord between. Sharpen the points of the teeth, and your rake is ready.

### Camp Broom

There are two ways of making a camp broom. First, the twig broom. This is easily made as follows: Cut a handle



an inch thick, and shape it to a shoulder, as in A B C. Lash on birch or other fine twigs, one layer at a time, until sufficiently

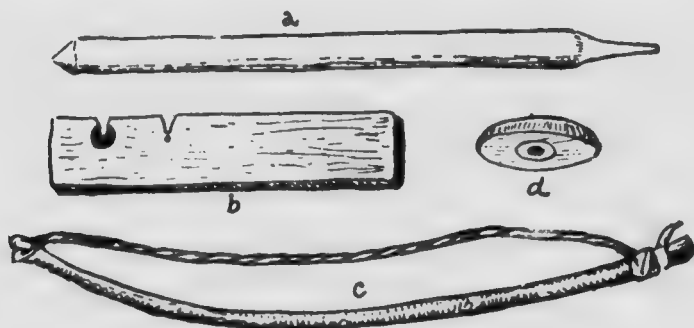
thick, as D E. Now at F, put a final lashing of cord. This draws the broom together, and binds it firmly to the handle. Trim the ends even with the axe, and it is ready for use.

The other style is the backwoods broom. This was usually made of blue-beech or hickory. A 4-foot piece of a 4-inch green trunk is best. Shavings 18 inches long are cut down, left attached at J, and bent back over the end until there is a bunch of them thick enough; when they are bound together with a cord and appear as in K. Now thin down the rest of the handle L M, and the broom needs only a little drying out to be finished.

### Rubbing-stick Fire

I have certainly made a thousand fires with rubbing sticks, and have made at least five hundred different experiments. So far as I can learn, my own record of thirty-one seconds from taking the sticks to having the fire ablaze is the world's record,\* and I can safely promise this: That every one who will follow the instructions I now give will *certainly succeed* in making a rubbing-stick fire.

Take a piece of dry, sound, balsam-fir wood (or else cedar, cypress, tamarac, basswood, or cottonwood, in order of choice) and make of it a drill and a block, thus:



1. Tools for firemaking

**Drill.** Five eighths of an inch thick, twelve to fifteen inches long; roughly rounded, sharpened at each end as in the cut (cut 1 a).

**Block, or board,** two inches wide, six or eight inches long, five eighths of an inch thick. In this block, near one end, cut a side notch one half an inch deep, wider on the under side; and near

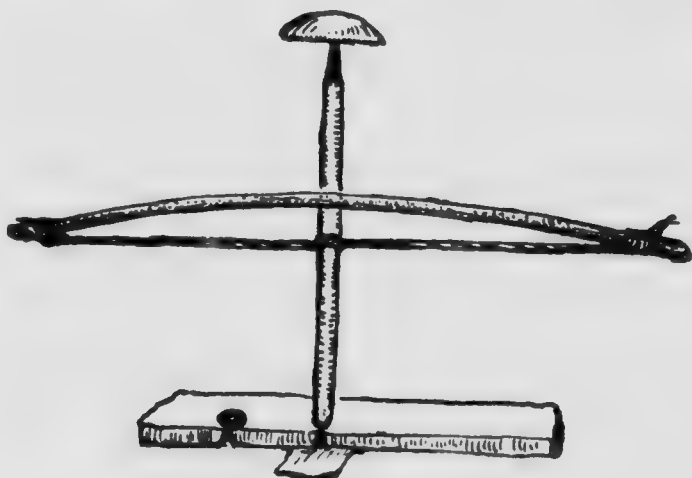
\*This was written ten years ago; since then the record has been repeatedly lowered by others.

its end half an inch from the edge make a little hollow or pit in the top of the block, as in the illustration (cut 1 b).

*Tinder.* For tinder use a wad of fine, soft, very dry, dead grass mixed with shredded cedar bark, birch bark, or even cedar wood scraped into a soft mass.

*Bow.* Make a bow of any bent stick two feet long, with a strong buckskin or belt-lacing thong on it (cut 1 c).

*Socket.* Finally, you need a socket. This simple little thing is made in many different ways. Sometimes I use a pine or hemlock knot with a pit one quarter inch deep, made by boring with the knife point. But it is a great help to have a good one made of a piece of smooth, hard stone or marble, set in wood; the stone or marble having in it a smooth, round pit three eighths



2. Ready to make fire

inch wide and three eighths inch deep. The one I use most was made by the Eskimo. A view of the under side is shown in cut 1 (fig. d).

Now we are ready to make the fire:

Under the notch in the fire-block set a thin chip.

Turn the leather loop of the bow once around the drill: the thong should be quite tight. Put one point of the drill into the pit of the block, and on the upper end put the socket, which is held in the left hand, with the top of the drill in the hole of the stone (as in cut 2). Hold the left wrist against the left shin, and the left foot on the fire-block. Now, draw the right hand back and forth steadily on level and the full length of the bow. This causes the drill to twirl in the pit.

Soon it bores in, grinding out powder, which presently begins to smoke. When there is a great volume of smoke from a growing pile of black powder, you know that you have the spark. Cautiously lift the block, leaving the smoking powder on the chip. Fan this with your hand till the live coal appears. Now, put a wad of the tinder gently on the spark; raise the chip to a convenient height, and blow till it bursts into flame.

- N. B. (1) *The notch must reach the middle of the fire-pit.*  
 (2) You must hold the *drill steadily* upright, and cannot do so without bracing the left wrist against the left shin, and having the block on a firm foundation.  
 (3) You must begin lightly and slowly, pressing heavily and sawing fast after there is smoke.  
 (4) *If the fire does not come, it is because you have not followed these instructions.*

### Drum

While an ordinary bought drum does very well for dancing, some tribes make their own, using a section of a hollow tree (or in some cases a small barrel) covered with untanned calf skin. It is soaked till soft, scraped clear of hair, and tightly stretched over each end of the hollow log. As it dries, it shrinks and becomes very tense, giving a good drum sound. Usually it is tuned up by warming at the fire before use.



The Indian Drum -

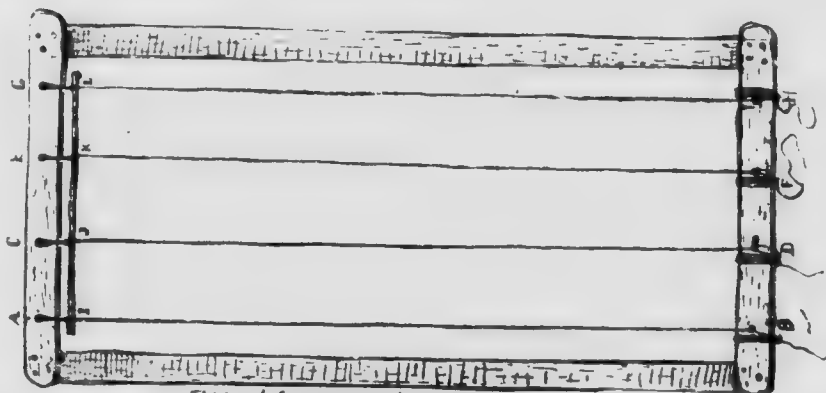
### The Woodcraft Willow Bed

The only bed I know of which is light, portable, woodcrafty, made of wildwood stuff that can be got anywhere, and costing nothing but a little labor, is the willow or prairie bed used by all the Plains Indians.

This is how it is made: On your first short hike to the country go to some stream bank or swamp, and cut about seventy straight rods of red willow (kinnikinnick), gray willow, arrow-wood, or any straight shoots, each about as thick as a pencil, when peeled, except one or two that are larger, up to half an inch thick; and all thirty inches long. Tie them up in a tight bundle with several cords until you get time to work them. Peel them, cut a slight notch in the butt of each rod, three quarters of an inch from the end, and you are ready to make the bed.



And here I may say that some folks, who could not get to the country to cut willow rods, have used the ordinary bamboo fishing-poles. These are sawed up in 30-inch lengths and split to the necessary thinness; the butt end yields four or even five of the splints, the top, but one. This answers well,



The rough frame used in making the bed.  
one rod is in place.

Cut No. 1

and three poles furnish material enough for the bed. This is allowable because, though the stuff is not of our own woods, it is American; it grows in the Southern States. One or two fellows in town have made the bed of dowels from a furniture factory.

Now get a ball of cord, that will stand a 25-lb. pull, a ball of fine linen thread, and a piece of shoemaker's wax, to complete your materials.

If outdoors, you can stretch your cords between two small trees about seven feet apart, but it is much easier if you make a rough frame of strips or poles seven feet by three inside to work on.

Cut four pieces of the cord, each about twenty feet long.

Double each and tie a 3-inch hard loop in the middle. Twist these doubled cords and put them on a frame (Cut No. 1), fastened to nails as at A B, the surplus cord wrapped around the frame, and the others as at C D E F G and H.

Take one of the heaviest rods, say a half-inch one, for a starter. With a pointed stick, open the two strands of the twisted cord, and set the rod tight against the knots I J K L.

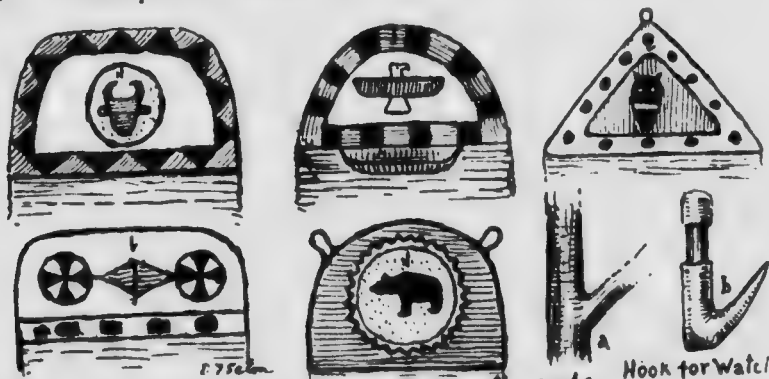
Now set a second rod in place below the first, seeing that two twists of the string are between each rod and that the

space separating them is one inch. Keep alternating butts and tops. At each point, that is at four places on each rod, make a lashing of waxed thread, holding rod and cords together (No. 2). I have seen beds with only two lashings, that is, one at each end, but four lashings is the sound and safe plan.

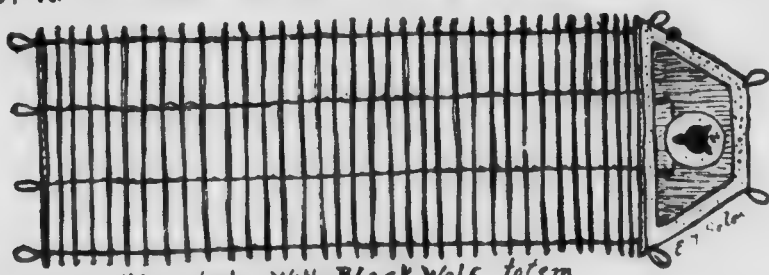
When the rod-work is six feet long, it is time to taper off.



No. 2. The style of finish. All should be lashed like a & b.



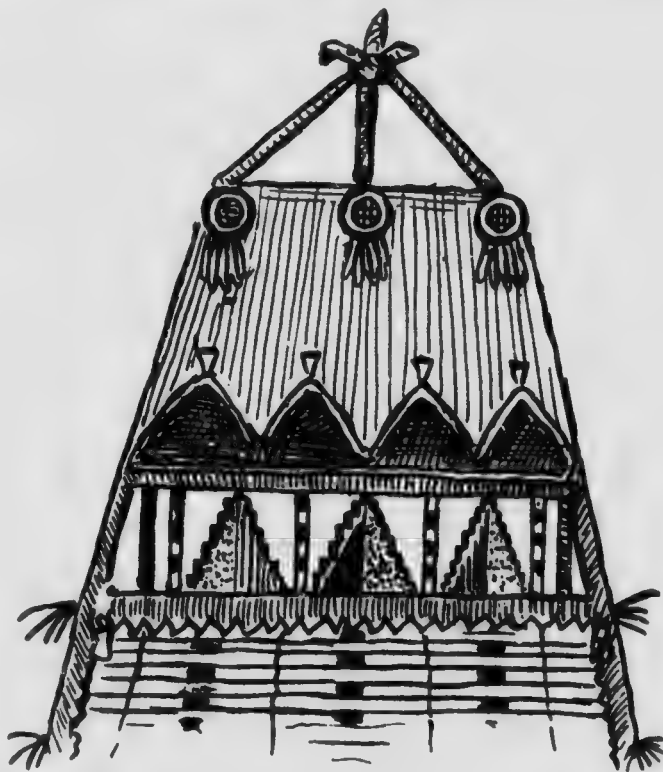
No. 3. Various heads - canvas covering the rods.



No. 4. Willow bed. With Black Wolf totem

Put in one big rod for a finish, and tie hard loops in the cords at this point. Then, using shorter rods, make a narrower part about eighteen inches high for a head. Finally, cover this head with a piece of brown khaki or canvas which should be decorated with the band's colors and totem, either painted or done in beadwork, or in colored cottons that are cut out and sewed on (Cuts Nos. 3 and 4). It is well to add also a wooden hook for one's watch (a and b, Cut No. 3) and a pocket for matches and money, etc., at night.

The Indians often elaborated these beds to a great extent when in permanent camps. Each rod was selected, perfectly straight, thinned at the butt end, to be uniform, and an extra piece added at the bed, head and foot, to curl up as end-boards. That at the head was elaborately decorated with symbols in beadwork. The illustration (No. 5) shows a beautiful beaded head.



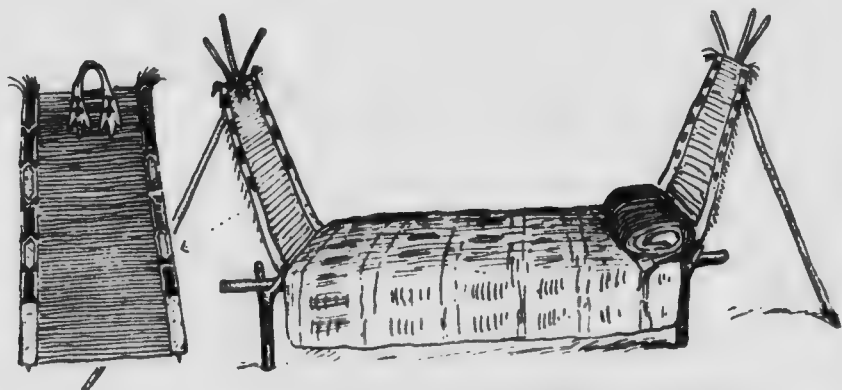
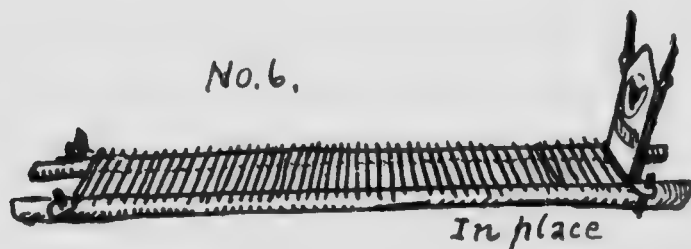
No. 5 The beaded head.

bed-head in my possession; not only the head, but the edges all around, are bound with red flannel.

When in use the bed is laid with the ends of the rods resting on two 4-inch poles, which are set firmly twenty-six inches apart; and the bed is staked at the corners through the loops to hold it in place (Cut No. 6). Cut No. 7 shows a fine specimen of an Arapaho bed all ready for use. When we can get no poles, we lay down a couple of boards or rods to carry the ends of the bed, and then dig the ground out in the middle. By means of two tall stakes the head part is held upright.

When packed up the bed is rolled. It weighs about five pounds.

Of course, you always need *as much under you as over you*. Couched on such a natural spring mattress as the willow bed you sleep in perfect comfort.



No. 7. ARAPAHO BED OF WILLOWS. Rep. Bur.  
Am. Ethn. p. 963, 14th Ann.

For those who wish to complete its sumptuousness a rush or grass mat may be added. (See Camp Loom.)

After long use the willows get bent, to prevent this the bed should be turned over every few days.

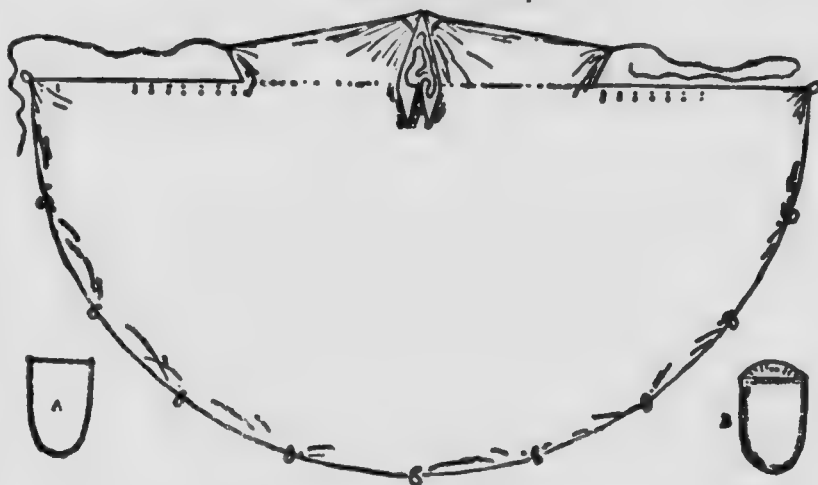
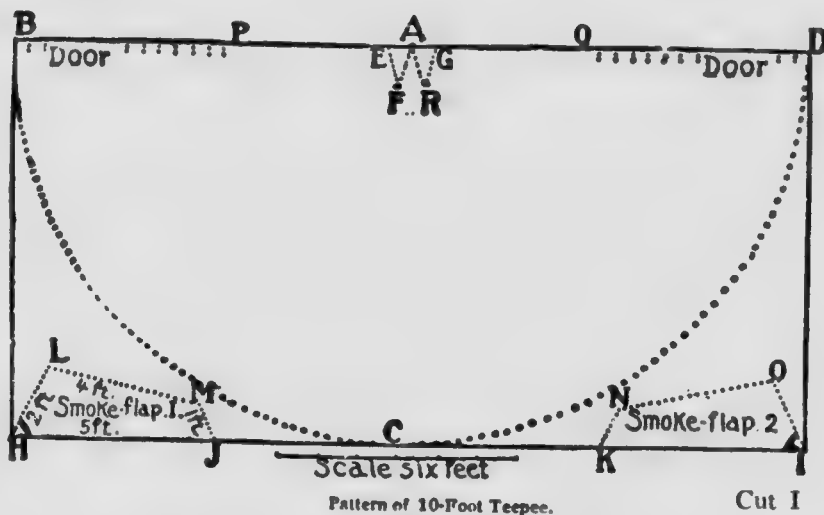
### Making A Teepee

(From *Ladies' Home Journal*, September, 1902)

Many famous campers have said that the Indian teepee is the best known movable home. It is roomy, self-ventilating,

cannot blow down, and is the only tent that admits of a fire inside.

Then why is it not everywhere used? Because of the difficulty



of the poles. If on the prairie, you must carry your poles. If in the woods, you must cut them at each camp.

A 10-foot teepee is the smallest size worth having for practical use. A larger one is easier to keep clear of smoke, but most

boys will prefer the small one, as it is much handier, cheaper, and easier to make. I shall therefore give the working plan of a 10-foot teepee of the simplest form.

It requires 20 square yards of 6- or 8-ounce duck, heavy unbleached muslin, or Canton flannel (the wider the better, as that saves labor in making up), which costs about \$6; 100 feet of  $\frac{3}{16}$  inch clothesline, 25 cents; string for sewing rope ends, etc., 5 cents. Total about \$7.00.

Get your material machine run together 20 feet long and 10 feet wide. Lay this down perfectly flat (Cut I). On a peg or nail at A in the middle of the long side put a 10-foot cord loosely, and then with a burnt stick in a loop at the other end draw the half-circle B C D. Now mark out the two little triangles at A. A E is 6 inches, A F and E F each one foot; the other triangle, A R G, is the same size. Cut the canvas along these dotted lines. From the scraps left over cut two pieces for smoke-flaps, as shown. In the long corner of each (H in No. 1, I in No. 2) a small three-cornered piece should be sewed, to make a pocket for the end of the smoke pole, or else a 2-inch hole right through.

Now sew the smoke-flaps to the cover so that M L of No. 1 is neatly fitted to P E, and N O of No. 2 to Q D.

Two inches from the edge B P make a double row of holes; each hole is  $1\frac{1}{2}$  inches from its mate, and each pair is 5 inches from the next pair, except at the 2-foot space marked "door," where no holes are needed.

The holes on the other side, Q D, must exactly fit on these.

At A fasten very strongly a 4-foot rope by the middle. Fasten the end of a 10-foot cord to J and another to K; hem a rope all along in the bottom, B C D. Cut 12 pieces of rope each about 15 inches long, fasten one firmly to the canvas at B, another at the point D, and the rest at regular distances to the hem rope along the edge between, for peg loops. The teepee cover is now made.

For the door (some never use one) take a limber sapling  $\frac{3}{4}$  inch thick and  $5\frac{1}{2}$  feet long, also one 22 inches long. Bend the long one into a horseshoe and fasten the short one across the ends (A in Cut II). On this stretch canvas, leaving a flap at the top in the middle of which two small holes are made (B, Cut II), so as to hang the door on a lacing-pin. Nine of these lacing-pins are needed. They are of smooth, round, straight, hard wood, a foot long and  $\frac{1}{4}$  inch thick. They skewer the overlapped edges together.

## Storm Cap or Bull-boat

During long continued or heavy rains, a good deal of water may come in the smoke-vent or drip down the poles. To prevent this the Missouri Indians would sometimes use a circular bull-boat of rawhide on a frame of willows as a storm cap.

For a twelve-foot teepee the storm cap should be about four feet across and eighteen inches deep, made of canvas with a hem edge in which is a limber rod to keep it in circular shape. It is usually put on with a loose teepee pole, and sits on top of the poles as shown, held down if need be by cords to its edge.



The poles should be short and even for this.

## Putting Up the Teepee

Twelve poles also are needed. They should be as straight and smooth as possible; crooked, rough poles are signs of a bad housekeeper—a squaw is known by her teepee poles. They should be 13 or 14 feet long and about 1 inch thick at the top. Two are for the smoke-vent: they may be more slender than the others, and should have a 4-inch crosspiece lashed on them about 2 feet from the top. Last of all, make a dozen stout short pegs about 15 inches long and about 1½ inches thick. Now all the necessary parts of the teepee are made.

This is how the Indian tent is put up: Tie three\* poles together at a point about 1 foot higher than the canvas, spread them out in a tripod the right distance apart; then lay the other poles (except three including the two slender ones) in the angles, their lower ends forming a small circle. Bind them all with a rope, letting its end hang down inside for an anchor. Now fasten the two ropes at A (Cut I) to the stout pole left over at a point 10 feet up. Raise this into its place, and the teepee

\* Some use four and find it stronger.

cover with it, opposite where the door is to be. Carry the two wings of the tent around till they overlap and fasten together with the lacing-pins. Put the end of a vent-pole in each of the vent flap pockets or else through the holes there, outside of the teepee. Peg down the edges of the canvas at each loop. Stretch the cover by spreading the poles. Hang the door on a convenient lacing-pin. Drive a stout stake inside the teepee, tie the anchor rope to this and the teepee



1<sup>st</sup> Set up tripod



3<sup>rd</sup> Set up tenth pole with teepee cover fastened to it by lashing rope



2<sup>nd</sup> Set up & bind other six poles



In hot weather raise the cover.

is ready for weather. In the centre dig a hole 18 inches wide and 6 inches deep for the fire.

The fire is the great advantage of the teepee, experience will show how to manage the smoke. Keep the smoke-vent swung down wind, or at least quartering down. Sometimes you must leave the door a little open or raise the bottom of the teepee cover a little on the windward side. If this makes too much draught on your back, stretch a piece of canvas between the two



or three of the poles inside the teepee, in front of the opening made and reaching to the ground. The draught will go up behind this.

By these tricks you can make the vent draw the smoke. But after all the main thing is to use only the best and driest of wood. This makes a clear fire. There will always be more or less smoke 7 or 8 feet up, but it worries no one there and keeps the mosquitoes away.

### Archery

The tribe should own a Standard Target—that is, 4 feet across, circular, made of straw, with a thin oilcloth cover, marked with a 9.6 inch centre of gold (called by some of our tribes "The Buffalo's Eye"); outside of that a 4.8 inch band of red, next a similar band of blue, next of black, next of white. Sometimes black rings of the right size are made to answer.

In scoring, the gold is 9, the red 7, the blue 5, the black 3, the white 1. The shortest match range for the target is 40 yards. If it is a 3-foot target the match range is reduced to 30 yards.

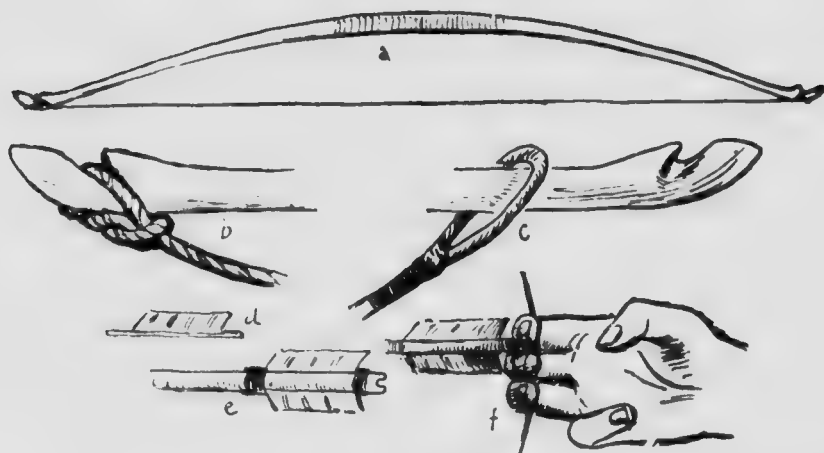
A target can be made of a burlap sack about five feet square. This should be stuffed full of hay or straw, then flattened by a few quilting stitches put right through with a long packing needle. On this the target is painted of exact size.

Each boy should have a bow that pulls 10 pounds up about one pound for each year of his age. A safe guide for boys up to sixteen. He should have at least 6 arrows and a quiver. The arrows 25 inches long, with 3 feathers, cone-points of steel or iron; brass points are useless. A guard or bracer for the left wrist is needed, and most boys require a glove to protect the fingers of the right hand.

Bows can be bought for \$1 to \$5 and arrows for 15 cents to \$3 each. But it is more creditable if you make them yourself.

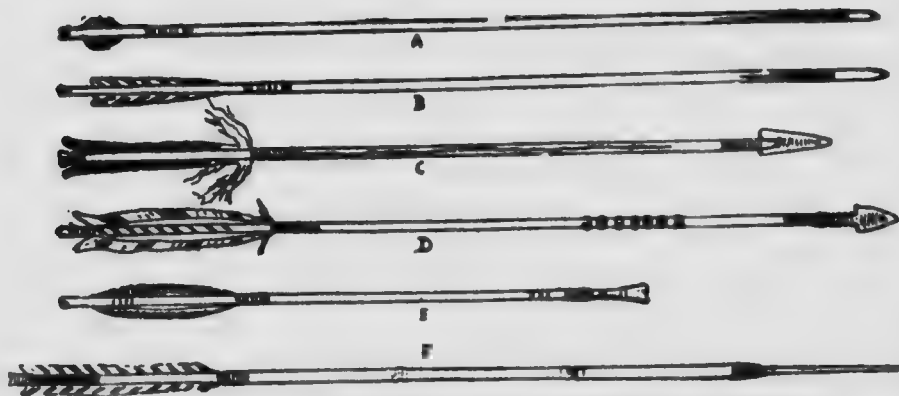
### How to Make a Bow

Take a straight, sound piece of cedar, bodark, yew, sassafras, mulberry, apple tree, black locust, ironwood, ash, elm, hickory, or hemlock. Cut it so that it is half sap and half heartwood, flat on the sapwood side (or front) and round on the heartwood side (or back). It should be about an inch thick in the middle and tapered off to  $\frac{3}{4}$  inch at each end. Cut two notches and put on a strong linen cord, either bought bow-string or one



## ARCHERY

a. The bow strung. b. The cord fast at the lower end. c. The cord with loop at upper end. d. Feather ready to tie on. e. Feathers lashed on. f. Holding.



## SIX SAMPLE ARROWS, SHOWING DIFFERENT FEATHERS

A is a far-flying steel-pointed bobtail, very good in wind. B is another very good arrow, with a horn point. This went even better than A if there were no wind. C is an Omaha war and deer arrow. Both heads and feathers are lashed on with sinew. The long tufts of down left on the feathers are to help in finding it again, as they are snow white and wave in the breeze. The grooves on the shaft are to make the victim bleed more freely and be more easily tracked. D is another Omaha arrow with a peculiar owner's mark of rings carved in the middle. E is a bone-headed bird shaft made by the Indians of the Mackenzie River. F is a war arrow made by Geronimo, the famous Apache chief. Its shaft is three joints of a straight cane. The tip is of hard wood, and on that is a fine quartz point; all being lashed together with sinew.

made of many twisted linen threads. At one end it is fast to the bow by a timber hitch, at the other by a hard loop.

When strung the string should be about 5 inches from the bow.

Arrows should be 25 inches long, and  $\frac{3}{8}$  of an inch thick. They are made of pine or ash. The Eastern Indians made them usually of arrow-wood or viburnum shoots.

Each should have a conical steel ferrule for head and three feathers to make it fly true. The feathers are lashed on.

## Holding and Drawing

It is very important to begin shooting in correct form and never change from that if you wish to become a good shot.

Grasp the bow in the left hand. Put the arrow on the string with the right. Hook the first three fingers on the string one above, two below the arrow. The little finger and thumb do nothing. (f in upper cut, p. 242.)

Stand perfectly upright, left side toward the target, the heels 12 inches apart and in exact line from the target. Hold the bow upright and the arrow against the left side of it, resting on the hand. Draw the cord till the head of the arrow touches the bow and the top of your thumb rests on the corner of your mouth. You must sight along the arrow for direction, but guess for elevation. Hold it one second.

Release the arrow by straightening your fingers and at the same time turn your hand back up, but keep the thumb tip at your mouth corner. Do not move the left hand a hair's-breadth till the arrow has struck.

Begin practising at very short range and slowly increase up to the standard, forty yards.

Unstring the bow when not in use.

## Woodcraft Paints

*Paints* for ornamenting robes are mixed with water. (Clark: "Sign Language.")

*Paints* for the body are mixed with grease or tallow from some animal.

*Paints* for lodges, totem poles, etc., were made durable by slowly melting or mixing into the grease enough rosin to make it sticky. This formed their paint oil.

*Red.* Before the Indian had the white man's vermilion he used a certain stiff yellow clay (brick clay) which, when burnt,

turned dull red—i. e., brick color. This he powdered and mixed with the grease oil.

In some parts of the country there are springs strongly impregnated with iron. A log of wood dug out of this—or failing that an armful of chips long soaked in it—when taken out, dried and burnt, yielded ashes of a beautiful rosy color. These worked up into a very pretty red.

*Yellow.* Yellow clay or ochres are common in clay regions and furnish a dull yellow. Clark says that the flower of the prairie goldenrod yields a good yellow; also the bright yellow



Zuni Eagles 23 Am. Rep. B.A.E.

moss one sees on the trunks of pine trees in the Rockies. When dried and powdered this makes a sort of chrome yellow, and is also used as a dye.

"The Sioux use bull-berries" for yellow. (Clark.)

*Blue.* They had no good blue. Blue clays come nearest to the color. Sometimes black and white mixed were used.

*Black.* Soot and charcoal, ground into the paint oil, made a good black.

*White.* For white they used white clays, which are common in some regions, or burnt shells, finely powdered.

Generally speaking, *Black* means joy; *White*, mourning; *Red*, beauty; and an excessive use of any of these or other colors, excitement.

Painting or greasing was universal among Indians. They did it to beautify themselves and also to protect the skins from the weather. Though we condemn them for the practice, most of our women and a great many of our men do the same thing for the same reason.

### Woodcraft Dyes

The dyes used to stain porcupine quills, spruce roots, and other strong material, of which they made ornaments and utensils, were very numerous, and some of them very beautiful.

*Red.* Soak the roots in the juice of the Squaw-berry-Blitum or Mis-caw-wa. Many other berries give red or purple.

*Black.* Boil the roots, etc., with the bark, branches, and berries of sumac, or the bark and chips of oak and soft maple, with some iron in the pot.

*Yellow.* A beautiful yellow is made by boiling the inner bark of golden or black oak. Or the root of yellowroot or hydrastis. In the Rocky Mountains the yellow moss off pine trees serves.

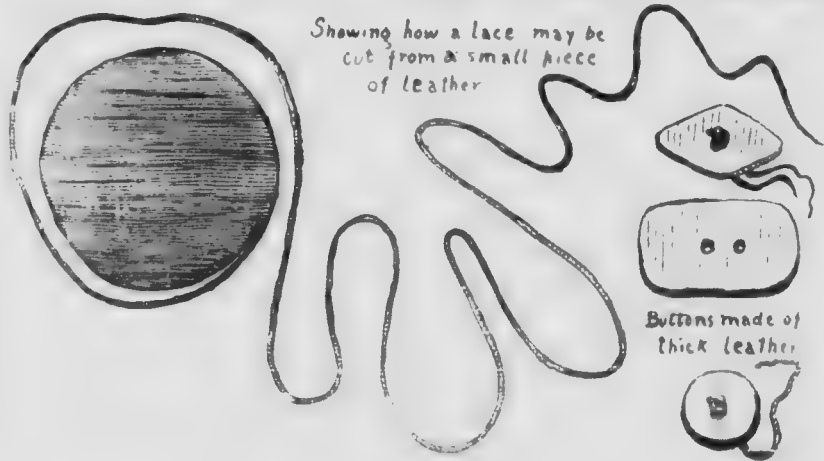
*Orange.* Orange is obtained by two dips—one in the red and one in the yellow after the first is dry.

### Lace or Thong

If you need a lace or thong and have no leather long enough, take a square piece, round the corners, then cut it round and round, till it is all used up. Pull and roll the thong produced until it is small and even, without kinks.

### Woodcraft Buttons

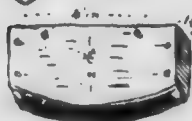
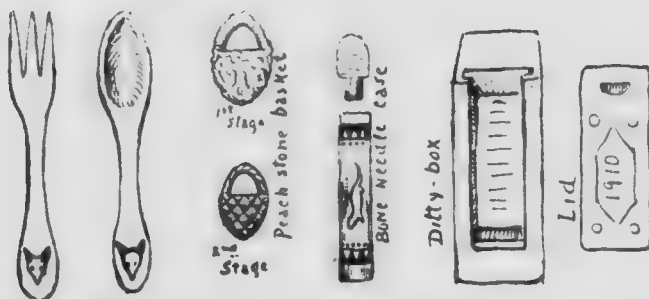
On the Plains, when a button is lost or needed, it is easy to make one of leather. Usually a piece of an old strap is used. Cut it the right size, make two holes in it, and sew



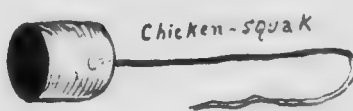
it on as an ordinary button. This never breaks or fails. As the old plainsman who first showed me, said, "There's a button that'll be right there when the coat's all wore away from behind it."

### Handicraft Stunts

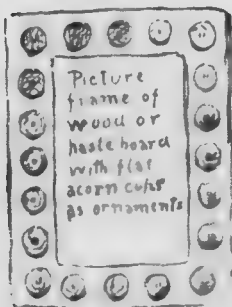
Let each Woodcrafter carve a *fork* and *spoon* out of wood, with his band totem on the handle.



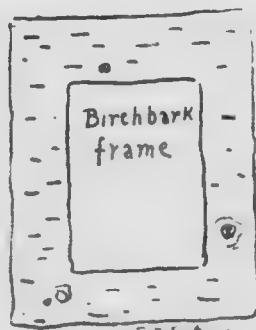
Turkey call - Box



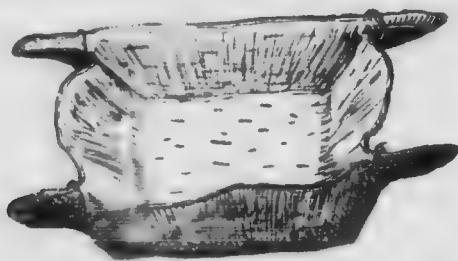
Chicken-squak



Picture frame of wood or huckle board with flat acorn caps as ornaments



Birchbark frame



Carve a handle out of a fowl's leg or wing bone, thus:  
Cut off three inches of the bone, plug up one

end with a soft wood plug, and make a wooden stopper for the other end. Then with the point of a knife decorate the bone. The lines should be scratched in deeply and then have black paint rubbed into them. If no black paint is handy make a mixture of soot and pine gum, with a little grease, butter, or oil.



Make a *tackle box* or *ditty box* 2 x 2 x 6 inches carved out of solid wood.

Make *peach-stone baskets*, of a peach-stone shaped with a file.

*Turkey call.* An interesting curio is the turkey call. Take a small cigar box and cut off the end as in the figure. Get a piece of slate about 2 x 3 inches long, or, failing slate, take a flat piece of wood and rub it well with rosin. Draw the two curved edges of the box lightly up this one way, and it will make a wonderfully good imitation of a turkey call.

*A chicken squawk.* This is another call easily made. Take any small round tin box—a condensed milk tin is good—and make a hole through the bottom and into this put a cord. A knot on the inside prevents the cord from slipping through. Rosin the cord and draw the fingers down it with short and long jerks. This gives a good imitation of a cackling hen.

*Picture frames* as in the illustrations.

*Birch-bark boxes and baskets.* These are easily made if the bark be softened in hot water before you shape it. The lacing is spruce roots, or raffia also softened with hot water.

*Noggin.* A noggin is a wooden cup made out of a tree burl or knot polished outside and carefully scooped out so as to leave a thin shell.

### Books Recommended

HOW TO MAKE BASKETS, Mary White. Doubleday, Page & Co. \$1.00 plus 10 cents postage.

BOX FURNITURE, Louise Brigham. Century Co. \$1.60

HOW TO MAKE POTTERY, Mary White. Doubleday, Page & Co. \$1.00

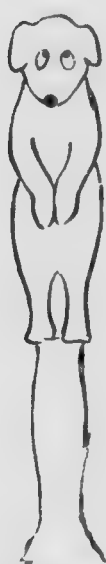
WORKING IN METALS, Charles Conrad Smith. Doubleday, Page & Co. \$1.00

FIELD AND FOREST HANDY BOOK, Dan C. Beard. Scribner's. \$1.50.

THE JACK OF ALL TRADES, Dan C. Beard. Scribner's. \$1.50.

### Souvenir Spoons

A good indoor activity of Woodcraft is the making of souvenir spoons. Some craftsmen are clever enough to make these out of wood or of silver. I have found that the best, easy-



Skookum



Wild Cat



Owl



Eagle



Johnny Bear

working material is bone, deer antler, or horn. Go to any big drug shop and get one of the 25-cent horn spoons. It is already of a good spoon-shape, of course. The handle is hard, smooth,



and ready to be ornamented with any device, cutting it with knife or file, into the owner's totem, or the band or the tribal totems which naturally suggest themselves.

At one time the wood of the laurel was much used for spoons, hence the bush is still called "spoon wood" in some regions.

The design should be sketched on with pencil or ink, then realized by shaping the outline with file or knife. The inner lines are merely scratched on the surface.

In general, one should avoid changing the main outline of the spoon handle or cutting it enough to weaken it. Always, rather, adapt the animal to fill the desired space.

There are several purposes the spoon can answer: First, as a spoon in camp, especially when prizes are offered to the camp that makes most of its own equipment; next, as a salable article; third, as an exhibition article when it is desired to get up a fine exhibit of handicraft products illustrating camp life.

### Bird Boxes or Houses

A good line of winter work is making bird boxes to have them ready for the spring birds.

Two styles of bird houses are in vogue: one a miniature house on a pole, the other is an artificial hollow limb in a tree.

First—the miniature cabin or house on a pole. This is very good for martins, swallows, etc., and popular with most birds, because it is safest from cats and squirrels. But most of us consider it far from ornamental.

To make one, take any wooden box about six inches square, put a wooden roof on it (a in cut), then bore a hole in the middle of one end, making it one and one half inches wide; and on the bottom nail a piece of 2 inch wood with an inch auger hole in it (b). Drive in a nail or a perch below the door and all is ready for a coat of soft, olive-green paint. After this is dry, the box is finished. When you set it in place, the end of the pole is shaved to fit tight into the auger hole in the bottom, and the pole then set up, or fastened to the end of the building. In the latter case a six or eight foot pole is long enough. In some neighborhoods it is necessary to put tin as a cat and rat guard, on the pole, as shown (c and d). Some elaborate these bird houses, making a half dozen compartments. When this is done the pole goes right through the lowest floor and fits into a small hole in the floor above.

These large apartment houses are very popular with the

the  
cing

bur  
ve a

plus

\$1.00  
\$1.00  
0.

uve-  
these  
easy-

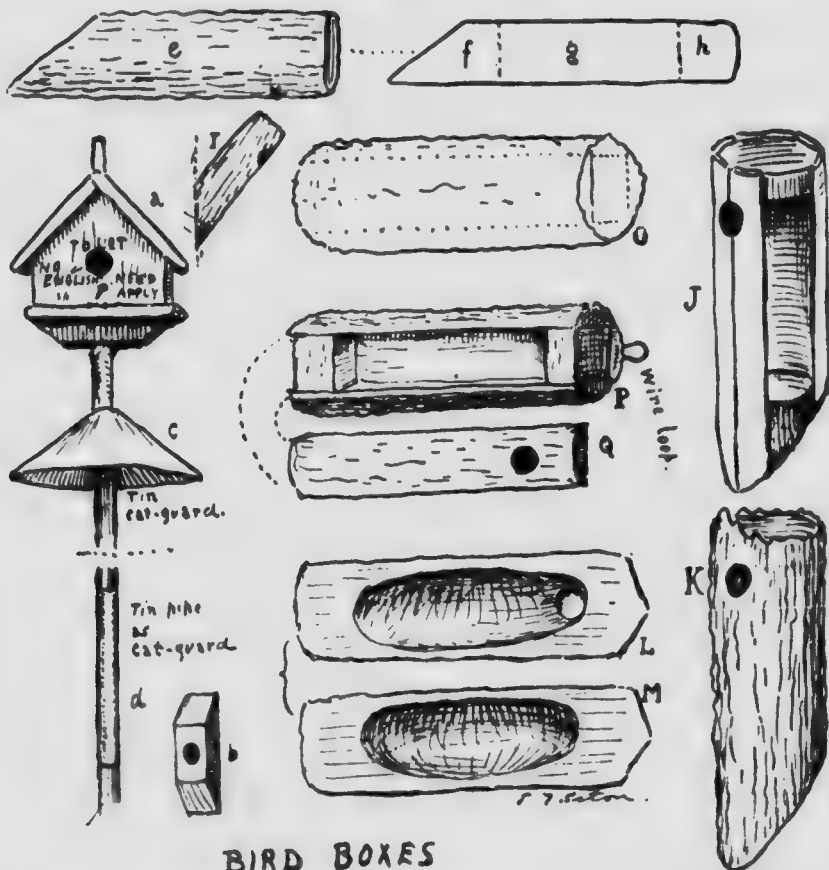


y Bear

ny big  
ready  
nooth.

purple martin, as well as with the English sparrow if they are set up in town.

Alexander Wilson tells us that the Choctaw and Chicasaw Indians used to make bird houses for the purple martins thus: "Cut off all top branches from a sapling, near their cabins, leaving the prongs a foot or two in length, on each of which they hang



BIRD BOXES

a gourd or calabash properly hollowed out for their convenience."

But the wild-wood box or hollow limb is more sightly and for some birds more attractive. There are several ways of using the natural limb. One is, take a seven or eight inch stick of chestnut about twenty inches long, split four slabs off it (o), then saw off three inches of each end of the "core" and nail the whole thing together again (p and q), omitting the middle part of the core.

Another way is to split the log in half and scoop out the interior of each half (l and m). When nailed together again it makes a commodious chamber, about five inches wide and a foot or more deep.

Another plan is: Take a five-inch limb of green chestnut, elm, or any other tough-barked tree. Cut a piece eighteen inches long, make a long bevel on one end (e). Now carefully split the bark on one side and peel it. Then saw the peeled wood into three pieces (f g h), leave out g and put the bark on again. Cut a hole in the bark on the longest side, at the place farthest from the beveled end (x in e), and your bird nest is finished. The beveled end is there to make it easily nailed up; when in place, it is as at i. The front—that is, the side where the door is—should always be the under one; and the door in each case should be near the top.

But these methods presuppose a fine big stick of wood. I have more often found it convenient to work with scraps.

Here is one easy way that I have long used: From a four or five inch round log saw off two sections each two inches thick, or failing a log, cut out two circles from a two-inch plank, for top and bottom parts (like f and h); then using six or seven laths instead of bark, make a hollow cylinder (j). Cover the hollow cylinder with a large piece of bark and cut the hole (k). Cut your entry at the top, half on each of a pair of laths. Cover the whole thing with bark nailed neatly on; or failing the bark, cover it with canvas and paint a dull green mottled with black and gray.

This last has the advantage of giving most room in a small log. Of course, if one can find a hollow limb, all this work is saved. By way of variety this one can be put up hanging from a nail, for which the wire loop is made.

To a great extent the size of hole regulates the kind of bird, as most birds like a tight fit.

For wrens make it about one inch; for bluebirds and tree-swallows one and one half inches; for martins two and one half inches.

### Sparrow-proof Bird Box

When I was a boy, I stumbled on a plan for keeping sparrows out of bird boxes and have recently revived it with success. It consists in making a conspicuous trap door to cover the entrance hole. Watch for a sparrow to enter, then pull the string, catch the sparrow and use him as seems best.

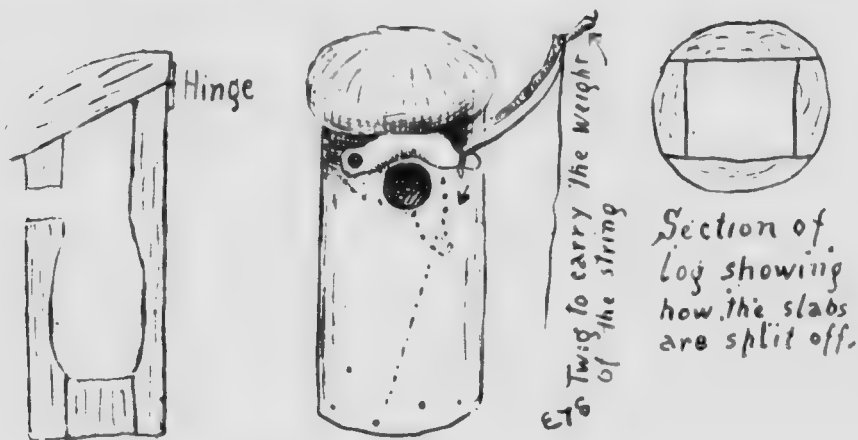
After one or two sparrows have been captured in this

way, their friends become suspicious of the device over the door and will not enter a nesting box with such an obvious menace.

Thus the sparrow's intelligence is turned against himself. Our native birds, having no evil experience with the trap, do not fear it.

The trap door is shown on the Woodcraft Bird Box, which is one made as already described by slabbing a round log, cutting out the core, then nailing it together again.

The twig or wire at one side carries the weight of the string which, otherwise, might close the door during a heavy wind.



*Woodcraft Bird Boxes*

When the string is firmly pulled, the twig gives and the door is pulled down over the hole.

The advantages of the Woodcraft Bird Box over the other kinds are:

- It is cheap.
- It is picturesque.
- It is observational.
- It is sparrow-proof.

#### Books Recommended

MAKING OF A HOLLOW TREE, by E. T. Seton, *Country Life in America*, November, 1908, and seq.

PUTTING UP BIRD BOXES, by B. S. Bowditch (special leaflet) Audubon Society, 1974 Broadway, New York, 15 cents per dozen.

USEFUL BIRDS AND THEIR PROTECTION, by E. H. Forbush, Massachusetts State Board Agriculture, p. 388.

For latest ideas send to The Jacobs Bird House Company, 404 So. Washington Street, Waynesburg, Pa.

## Knots

The following are standard knots that an accomplished camper should know. Remember, a perfect knot is one that neither jams nor slips. See pages 254, 255.

## Blazes and Signs

### Blazes

First among the trail signs that are used by Woodcrafters, Indians, and white hunters, and most likely to be of use to the traveler, are axe blazes on tree trunks. Among these some may vary greatly with locality, but there is one that I have found everywhere in use with scarcely any variation. That is the simple white spot meaning, "*Here is the trail.*"

The Indian in making it may nick off an infinitesimal speck of bark with his knife, the trapper with his hatchet may make it as big as a dollar, or the settler with his heavy axe may slab off half the tree-side; but the sign is the same in principle and in meaning, on trunk, log, or branch from Atlantic to Pacific and from Hudson Strait to Rio Grande. "This is your trail," it clearly says in the universal language of the woods.

There are two ways of employing it: one when it appears on back and front of the trunk, so that the trail can be run both ways; the other when it appears on but one side of each tree, making a *blind trail*, which can be run one way only, the blind trail is often used by trappers and prospectors, who do not wish any one to follow their back track.

But there are treeless regions where the trail must be marked; regions of sage brush and sand, regions of rock, stretches of stone, and level wastes of grass or sedge. Here other methods must be employed.

A well-known Indian device, in the brush, is to break a twig and leave it hanging (*second line*).

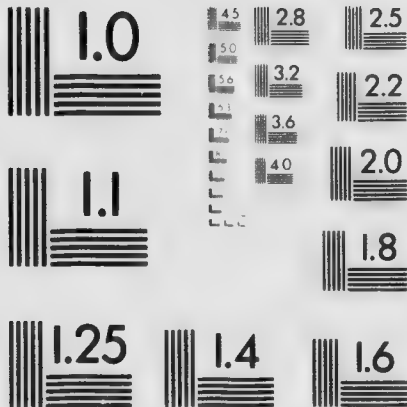
Among stones and rocks the recognized sign is one stone set on top of another (*top line*) and in places where there is nothing but grass the custom is to twist a tussock into a knot (*third line*).

These signs also are used in the whole country from Maine to California.



# MICROCOPY RESOLUTION TEST CHART

(ANSI and ISO TEST CHART No. 2)



APPLIED IMAGE Inc

1653 East Main Street  
Rochester, New York 14619 SA  
(716) 482-0300 Phone  
(716) 288-5389 Fax



Reef knot or square knot: never slips or jams: easily loosed.



Bowline: a noose that neither jams nor slips.



Binder knot, for joining heavy cord, etc.



Anchor bend.



Slip knot, running noose, or halter knot.



False reef or granny: always bad.



The fisherman's knot. It never slips; is easily opened by pulling the two short ends.



Weaver's knot or sheet bend, for joining small cords.

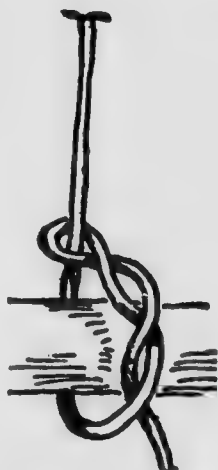


Two half-hitches.

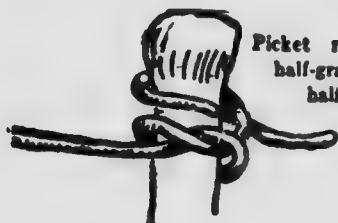


Fixed loop in middle of a cord.





Timber hitch: cannot slip or jam; easily loosened.



Picket rope with half-granny and a half-hitch.



Blackwall hitch.



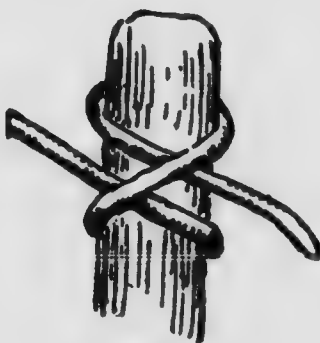
Becket hitch, for joining a cord and a rope.



Carrick bend, for joining large ropes.



Wax-end lashing; hidden end.



Clove hitch.

## SIGNS AND BLAZES

### Signs in Stones



This is the Trail



Turn to the Right



Turn to the Left



Important Warning

### Signs in Twigs



This is the Trail



Turn to the Right



Turn to the Left



Important Warning

### Signs in Grass



This is the Trail



Turn to the Right



Turn to the Left



Important Warning

### Signs in Blazes



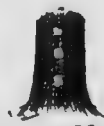
This is the Trail



Turn to the Right



Turn to the Left



Important Warning

### Code for Smoke Signals



Camp is Here



I am lost. Help!



Good News



All come to Council

### Some Special Blazes used by Hunters & Surveyors



A Trap to Right



A Trap to Left



Camp is to Right



Camp is to Left



Special



Adirondack Special



Surveyor's Line Here

In running a trail one naturally looks straight ahead for the next sign; if the trail turned abruptly without notice one might easily be set wrong, but custom has provided against this. The tree blaze for turn "to the right" is shown in No. 2, fourth row; "to the left" in No. 3. The greater length of the turning blaze seems to be due to a desire for emphasis as the same mark set square on is understood to mean "Look out, there is something of special importance here." Combined with a long side chip it means "very important; here turn aside." This is often used to mean "camp is close by," and a third sign that is variously combined but always with the general meaning of "warning" or "something of great importance" is a threefold blaze. (No. 4 on fourth line.) The combination (No. 1 on bottom row) would read "Look out now for something of great importance to the right." This blaze I have often seen used by trappers to mark the whereabouts of their trap or cache.

Surveyors often use a similar mark—that is, three simple spots and a stripe to mean, "There is a stake close at hand," while a similar blaze on another tree near by means that the stake is on a line between.

### Stone Signs

These signs done into stone-talk would be as in the top line of the cut.

These are much used in the Rockies where the trail goes over stony places or along stretches of slide-rock.

### Grass and Twig Signs

In grass or sedge the top of the tuft is made to show the direction to be followed; if it is a point of great importance three tufts are tied, their tops straight if the trail goes straight on; otherwise the tops are turned in the direction toward which the course turns.

The Ojibways and other woodland tribes use twigs for a great many of these signs. (See second row.) The hanging broken twig like the simple blaze means "This is the trail." The twig clean broken off and laid on the ground across the line of march means, "Here break from your straight course and go in the line of the butt end," and when an especial *warning* is meant, the butt is pointed toward the one following the trail and raised somewhat, in a forked twig. If the butt of

the twig were raised and pointing to the left, it would mean "Look out, camp, or ourselves, or the enemy, or the game we have killed is out that way." With some, the elevation of the butt is made to show the distance of the object; if low the object is near, if raised very high the object is a long way off.

These are the principal signs of the trail used by Woodcrafters, Indians, and hunters in most parts of America. These are the standards—the ones sure to be seen by those who camp in the wilderness.

### Smoke Signals

There is in addition a useful kind of sign that has been mentioned already in these papers—that is, the Smoke Signal. These were used chiefly by the Plains Indians, but the Ojibways seem to have employed them at times.

A clear hot fire was made, then covered with green stuff or rotten wood so that it sent up a solid column of black smoke. By spreading and lifting a blanket over this smudge the column could be cut up into pieces long or short, and by a preconcerted code these could be made to convey tidings.

But the simplest of all smoke codes and the one of chief use to the Western traveler is this:

One steady smoke—"Here is camp."

Two steady smokes—"I am lost, come and help me."

I find two other smoke signals, namely:

Three smokes in a row—"Good news."

Four smokes in a row—"All are summoned to council."

These latter I find not of general use, nor are they so likely to be of service as the first two given.

### Signal by Shots

The old buffalo hunters had an established signal that is yet used by the mountain guides. It is as follows:

Two shots in rapid succession, an interval of five seconds by the watch, then one shot; this means, "where are you?" The answer given at once and exactly the same means "Here I am; what do you want?" The reply to this may be one shot, which means, "All right; I only wanted to know where you were." But if the reply repeats the first it means, "I am in serious trouble; come as fast as you can."

## Tramp Signs

Among the many signs and blazes doing active service in our cities, just as their predecessors did in the wilderness, are the signs of tramps and Gypsies.

These, no doubt, vary from time to time, but they must be fairly permanent and general; otherwise, they would not serve their purpose.

An interesting article on Tramp Signs appears in the *American Examiner* of January 30, 1910. It is accredited to Professor Wallace Ernster (Michigan University) and Chief of Police C. J. McCabe, of Poughkeepsie, N. Y. It gives the following as well-established Tramp Signs:

Burglar  
alarms and  
telephone



| = child

Look out  
gun handy



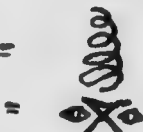
Y = woman

Only women  
here. Easy



W = Old woman

Go by! Policeman  
Constable or  
Judge's house



X = Man

This camp is safe



X = Old Man

Make you work  
for meals



All right. Will  
give up



W = Vicious  
Dog

Worth robbing



○ = No use

XH = Must work for  
meal.

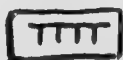
To these, the Reverend Horace E. Clute, of New York, in December 6, 1914, issue of the same paper adds:



= Good for a meal



= Tell a yarn, there are women in house



= Dog

In Chambers' Encyclopedia, 1901, is an important article on Vagrants. The author is Chief Constable Henderson. He notes the fact that "The Book of Vagabonds and Beggars," edited by Martin Luther in 1529, is one of the most interesting and instructive records of Vagrants, and classifies them in twenty-eight well-known groups.

He then gives the following blazes used by Vagrants, Tramps, or Mouchers in England. I do not know that these are used in America, but the same ideas are in use and some of these marks are much like the corresponding ones in the American List.



Religious but kind.



Go in this direction; the other road is good.



Stop. If you are selling what they happen to want, they'll buy; they are cute.



Spoiled; too many vagrants call.



Mind the dog; may give you in charge.



Dangerous; likely to be given in charge.



Cross sticks put by Gypsies and tramps at the junction of roads to show in which direction their friends have gone before them; the long limb pointing the way.



Too poor; give nothing.



Good; safe for something if you don't talk much.

### How to Raise Money

A good Woodcrafter always "travels on his own steam." When you want to go camping, don't go round begging for the cash, but earn it. And a good time to do this is in the winter when you are forced to stay indoors.

How? One way, much in the line of our work, is making some bird houses. I know a number of persons who would gladly put up bird houses, if they could get them easily.

You can either sell them in a lot to a man who has already a shop for garden stuff or hardware, or put them on a hand cart and sell them at much better prices yourself. It is useless to

take them to a farmer, or to folks in town, but a ready sale will be found among the well-to-do in the suburbs, in a country town, or among the summer residents of the country. The simple boxes might fetch 50 cents each, the more elaborate \$1.00 or \$2.00 according to the labor they have cost you.

Another way is the manufacture of Indian stuff such as furniture, birch-bark boxes, baskets, rustic seats, etc.

These methods may be used by the individual or by the tribe.

Money may also be raised through many group activities such as plays, entertainments, dances, and bazaars.

Mushroom growing is another good way to make some money, provided one has a cellar or roothouse at one's disposal. To learn how, send to the United States Department of Agriculture, for *Farmers' Bulletin*, No. 204, "The Cultivation of Mushrooms."





## **CHAPTER IV**

### **FRIENDS IN THE OUT OF DOORS**

**How to Know the Wild Things**  
**Sixty-four Common Wild Flowers**  
**The Woodcraft Boy in the Forest**  
**Fifty Common Forest Trees**

**The Stars**  
**Forty Birds**  
**Snakes Good and Bad**



## CHAPTER IV

### FRIENDS IN THE OUT OF DOORS

#### How to Know the Wild Things

All boys want to know the ways and things of Nature. The difficulty is to know where to begin. There are so many kinds of flowers, ferns, birds, trees, grasses, bugs, insects, fish, rocks, etc., that one is confused and hardly knows where to begin his search for knowledge.

The trail is not so hard to find as it was a few years ago, for today there are plenty of blazes on its trees and the footway is well worn and cleared of logs—that is to say, there are plenty of good handbooks, not to speak of fellow travellers, who help by pointing to the blaze that perhaps escaped our eye, and who are wearing the pathway smooth.

But one must make a start, and it is well to get a few general rules in mind. First, take one thing at a time. Second, "Look in the book." Have a simple but comprehensive guide book (if possible one that you can own) that tells in simple, clear language the main facts. Later, you will want to go into more scientific study. Third, make a record in a notebook of what you see and either make drawings or preserve specimens. Fourth, if you have a friend "who knows" get information from him as to the specimen you have seen or have in your possession.

The best way to begin, supposing you are alone, is with the flowers. They are so easy "to catch" and preserve.

Get a good handbook of flowers, Reed's is the smallest, simplest, and best for beginners (Dana's, Blanchan's, or Lounsbury's are also good) and either a big scrap album or, better, a 12 by 18 inch portfolio with twenty or thirty loose sheets of heavy white or gray paper to fit; also a tin case, any big tin will do; but you can buy a properly made one for about a dollar.

Botanical enthusiasm is always at its height just when you find the first spring flower. Suppose then, in March, you have found the liverleaf in its blue bloom.

Take up one, leaf and flower; put it in your tin case; that will keep it perfectly fresh for many hours. At home, take a

bundle of old newspapers as dry as possible, lay the plant flat on one of them, spreading the flower as you wish it to remain, put the other papers on top and then a board; last, a heavy weight.

If the room and the papers are dry, the plant will be dried in three days. Then stick it on one of the sheets in the portfolio with a few strips of paper across it here and there. Then write the time and place on the sheet, also the name as soon as you can find it. And it is easy to get the name when you have the specimen. There is sure to be some botanist within reach.

If you gather and preserve half a dozen wild flowers each time you go out in the season, you very soon have the fifty that are needed to win you a *coup*.

But you are also getting something else—a lot of pleasant friends that you will remember and be glad to see as long as you live.

Of course, there are some plants that are much harder to handle than the liverleaf, such as the jewelweed, which are so juicy that they must be reset on new dry paper perhaps two or three times. Some have roots so big that they are better left off, and some are so big that one must select a small example or take only a sprig; but always get the flowers, if possible.

*The Trees* are also very easy because they may be found in town as well as in country. Their flowers are usually up high and come in the spring. They may be difficult to see, but if one studies the leaves, the bark, and the general shape of the tree, they will be readily identified, so that one can see and know an old friend at considerable distance. The leaves and flowers may be preserved in the same way as the flowers.

The best tree books are by Keeler, Apgar, Hough, Sargent, Britton, etc.

*The Birds* are the true love of every young naturalist, and the only reason for giving them third place is that they are harder to study than flowers and trees.

You cannot walk up to the bird, at once note its every color spot, and so find who he is. You must make hasty notes through an opera glass and then turn to a handbook, unless you have a bird-sharp friend with you or a specimen in your hand.

Therefore, oh, bird lover, begin with a notebook, a field glass, and a copy of Reed's Bird Guide. Later when you really get acquainted with the birds you will want Chapman's Handbook. These books give a sketch of the habit and range as well as a description of the plumage, nest, and eggs.

*The Quadrupeds, or Animals*, as they are commonly called, are the most interesting of all to most people; but are the hardest of

all to study because they are so seldom seen. Partly due to man's endless pursuit, the wild fourfoots are nearly all nocturnal now; but they are there, and far more numerous than you would imagine.

If you live in New York City, for example, you may be sure that within five miles of the City Hall you can find twenty wild quadrupeds living their lives as they always did. Thus, there are muskrats along the Bronx and Harlem rivers in the salt marshes; there are red, gray, and flying squirrels, as well as chipmunks, in most of the parks. There are plenty of woodchucks in Westchester County, although I do not know of any within the five-mile radius. Of course, there are deer mice and short-tailed field mice, and jumping mice in most of the large parks or along the Jersey shore of the Hudson; and where there are mice there are weasels, and where there are weasels there are mink.

The cottontail rabbit is common in some of the large parks and in most of the near woodlands, and there are at least three species of shrew and mole within the limits.

If we go a little farther into Westchester County or Jersey, we shall enter the region of the skunk, the fox, the common deer, the coon, and the possum.

So that the New York naturalist has a large opportunity among the quadrupeds; and the resident of Chicago, Boston, or Philadelphia is just as well off; while, of course, the country girl has all the world before her.

But we seldom see the things, how are we to know that they are there?

By the tracks chiefly. The mud, the dust, or the snow will tell next morning much about the creature that passed in the night, and in time, about all that dwell near by.

"Life Histories of Northern Animals," by Ernest Thompson Seton, is the only book that gives a full account of the common animals and their tracks; but a good book on Tracks and Tracking has been published by J. Brunner.

The difficulties in the way of the student of mammals are perhaps the largest of all, but the rewards are as great; and every skull, every skin, every good track drawing, is a little victory that will give you pleasure to see as long as you live.

*Insects* are easily studied and preserved. A collection of butterflies, made according to instruction in the "Butterfly Book," Doubleday, Page & Company, is easily begun; while beetles and other orders of bugs, if less interesting, are yet more easily made.

In general, to those who would know the wild things: Keep a

journal of your notes, sketches, and photos; get a good handbook; collect specimens—and you have the three basic things. All the rest will be in measure of your perseverance.

## SIXTY-FOUR COMMON WILD FLOWERS

### Of the United States and Southern Canada

In preparing this list, Britton and Brown's "Ill. Flora of the Northern U. S. and Canada" has chiefly been consulted, but free use has been made of the works of Neltje Blanchan, Alice Lounsberry, and Chester A. Reed.

The student is advised to color each flower from nature as the opportunity occurs, using water colors over the outline given. They are grouped here to correspond with the eight plates.

#### 1. Blue Flowers

Liverleaf, or Hepatica (*Hepatica triloba*). A lovely lilac or blue, the first of the spring flowers in most regions. Blooms in the woods from March to May, from Nova Scotia to Manitoba and southward.

Blue-eyed Grass, Blue Star, or Star Grass (*Sisyrinchium angustifolium*). A bright blue flower of the Iris family; found in rich meadows from Newfoundland to British Columbia and southward halfway to the Gulf; blooms May to August.

Bluebell, Harebell, or Hairbell (*Campanula rotundifolia*). Found on rocky places and uplands nearly everywhere south of the Middle States. Blooms all summer.

Common Violet, or Heartsease (*Viola cucullata*). The heart shape of the leaf was held to be the proof of its power to set the heart at ease. In rich ground, Nova Scotia to Minnesota and southward nearly to the Gulf States. Blooms in spring.

Bird's foot Violet (*Viola pedata*). So called from the shape of its leaves. Dry ground; Maine to Minnesota and southward.

Lupine (*Lupinus perennis*). Dry soil, from Maine to Minnesota and southward. Early summer.

Self-heal, or Heal-all (*Prunella vulgaris*). Dry ground everywhere; blooming May to October.

Vervain, Blue Vervain, or Wild Hyssop (*Verbena hastata*). In moist ground everywhere; blooms June to September.

Chicory, or Succory (*Cichorium Intybus*). Flowers bright blue or sometimes white. The roots roasted and ground make a wholesome substitute for coffee. Originally came here from



Europe. Now found generally in the eastern U. S. Blooms July to October.

Fringed Gentian (*Gentiana crinita*). Bright blue; rarely white. Rich meadows, Quebec to Minnesota and southward halfway to Gulf. Blooms September and October.

## II. White Flowers

Bloodroot (*Sanguinaria Canadensis*). Noted for bleeding when cut. Its root furnished the Indians with a red paint. In rich woods, from Nova Scotia to Manitoba and southward. Blooms April and May.

May Apple, or Wild Mandrake (*Podophyllum peltatum*). In low woods; southern Ontario to Minnesota and southward. Flowers in May; fruit ripe in July or August and wholesome.

Starflower (*Trenthalia Americana*). In damp woods from Labrador westward and south to the Middle States. Blooms in May and June.

Indian Pipe (*Monotropa uniflora*). In rich woods nearly all U. S. and southern Canada. Blooms from June to August. The whole plant white or occasionally pink.

Saxifrage (*Saxifraga virginensis*). In dry rocky woods, New Brunswick to Minnesota and southward to Georgia. One of the early flowers of spring. Blooms March to May.

Ox-eye Daisy (*Chrysanthemum Leucanthemum*). In pastures throughout most of the area, as a troublesome weed from Europe. In bloom May to November. The white rays surround a bright yellow disk.

Big White Trillium, or Wake-robin (*Trillium grandiflorum*). In woods, Quebec to Minnesota and southward. Blooming in May and June.

Boneset (*Eupatorium perfoliatum*). In wet places, New Brunswick to Manitoba and southward. Blooms July to September; flowers white, but sometimes blue.

## III. Pink, or White Streaked with Pink

Trailing Arbutus (*Epigaea repens*). In sandy or rocky woods; generally distributed in eastern America. Blooms in spring, March to May.

Twin-flower (*Linnea borealis*). In cold woods of the northern half of the continent and southward along the high mountains. Blooms June to August.



Spring Beauty (*Claytonia Virginica*). In moist wood throughout eastern America. Blooms March to May.

Queen Orchid, or Showy Lady's Slipper (*Cypripedium reginae*).

II. White flowers.



In swamps, Nova Scotia to Minnesota and south to Georgia. Blooms June to September.

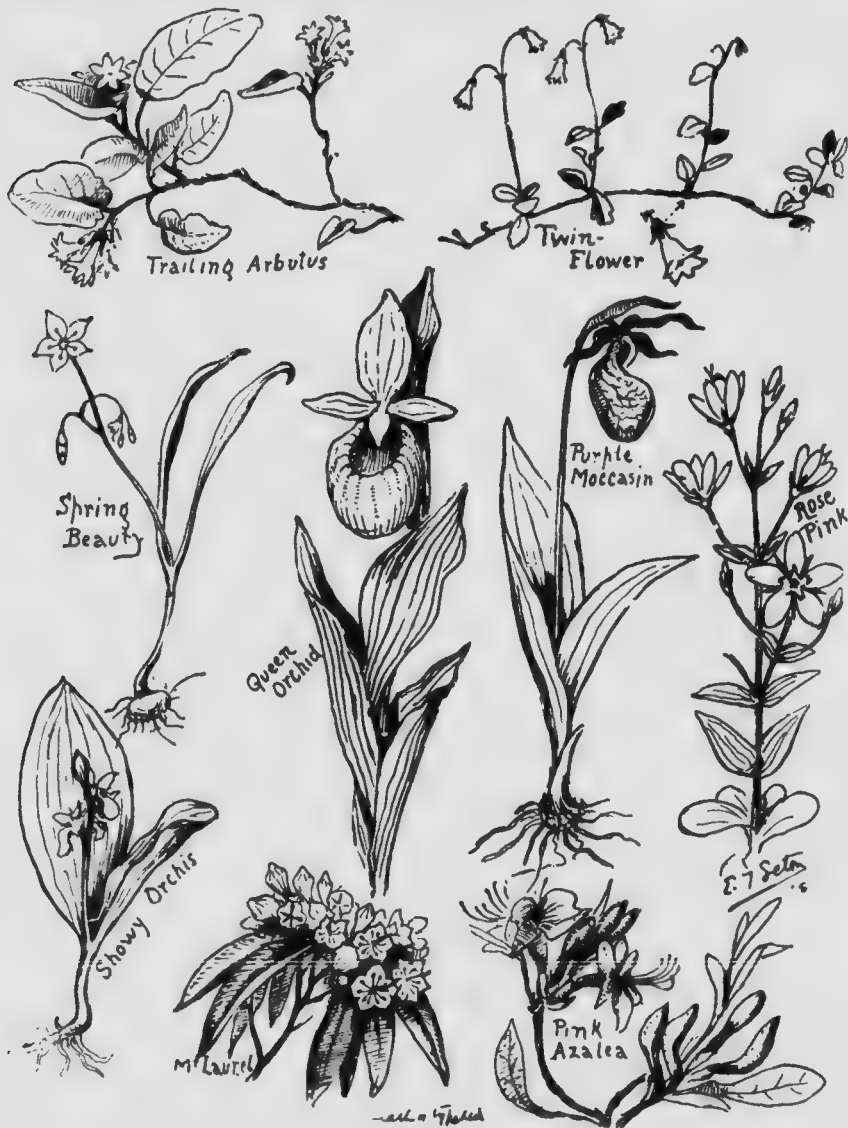
Purple Moccasin Flower (*Cypripedium acaule*). In sandy or

rocky woods; Newfoundland to Minnesota and south to the Middle States. Blooms May and June.

Rose Pink (*Sabbatia angularis*). In rich soil New York to Ontario and south to the Gulf States. Blooms July and August.

Showy Orchis (*Orchis spectabilis*). In rich woods, New Brunswick to Minnesota and southward to the Middle States. Blooms

### III. Pink or White streaked with Pink.



in April and June. Flowers violet or purple streaked with white or light purple.

Mountain Laurel (*Kalmia latifolia*). In sandy or rocky woods, New Brunswick and Ontario, southward. Blooms May and June.

Pink Azalea (*Azalea nudiflora*). In dry woods, Maine to Illinois and southward. Blooms in April and May.

#### IV. White, or Greenish White Flowers

Plantain, Raggrass, or Whiteman's Foot (*Plantago major*). Everywhere in our region. Blooms all summer long as well as in spring.

Queen Anne's Lace, or Wild Carrot (*Daucus carota*). Everywhere; brought from Europe. "The original of the cultivated carrot," B. & B. Blooms all summer.

Yarrow, or Milfoil (*Achillea millefolium*). Generally distributed. Blooms June to November.

Grass of Parnassus (*Parnassia Caroliniana*). In low meadows, New Brunswick and Manitoba and southward to the Middle States. Blooms June to September.

Solomon's Seal (*Polygonatum biflorum*). In woods, New Brunswick to Ontario and southward. Blooms April to July. Its roots show seal-like impression, whence the name.

False Solomon's Seal, Wild Spikenard, or Zigzag (*Vagnera racemosa*). United States and south Canada generally. Blooms May to July.

Stickweed, Cleavers, or Bedstraw (*Galium mollugo*). Generally distributed in fields in the Northeastern States. It flowers all summer long. There is a kind with a yellow flower.

Pennsylvania or Canada Anemone (*Anemone Canadensis*). Labrador to the Plains and southward to Kansas on low ground. Blooms all summer.

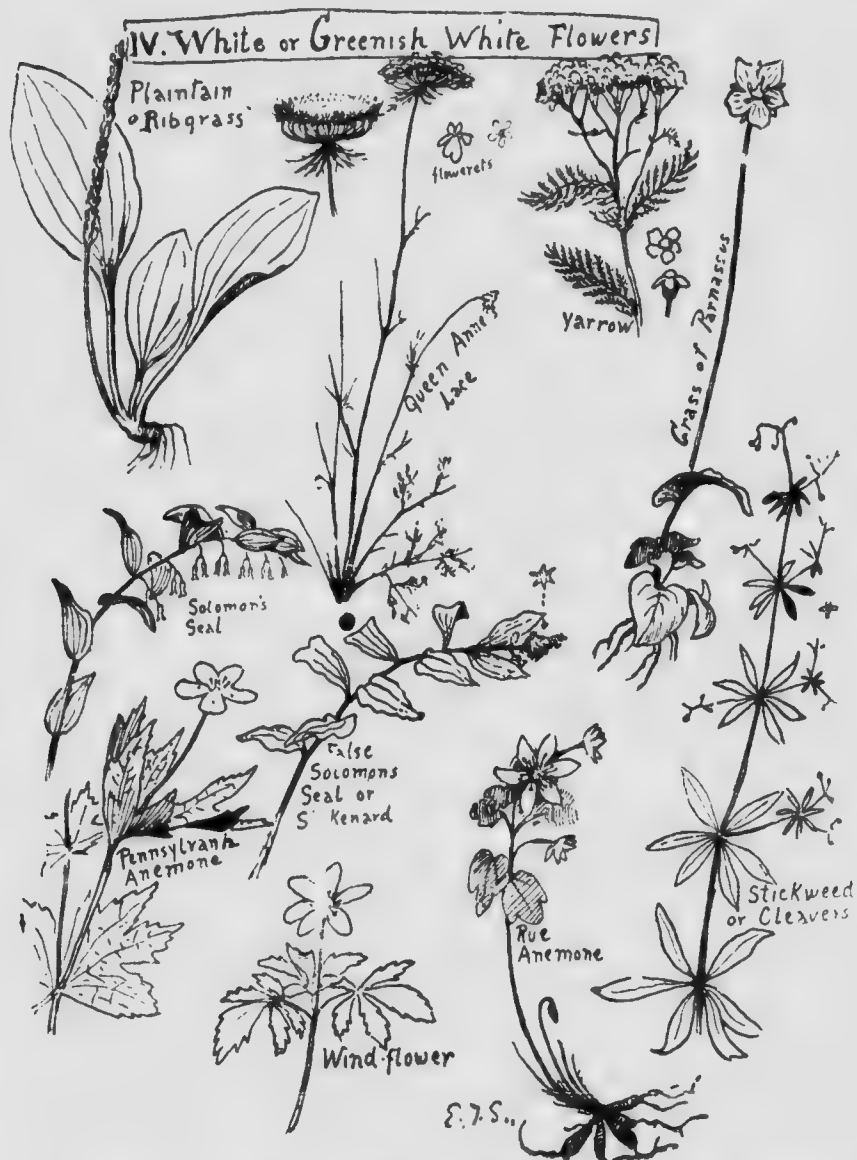
Wind flower (*Anemone quinquifolia*). In low woods. General east of the Rockies. One of the early spring flowers. Blooms April to June.

Rue Anemone (*Syndesmon thalictroides*). In woods, Atlantic to Minnesota and south to Kansas. White, but often pinkish. One of the earliest spring flowers. Blooms March to June.

#### V. Yellow Flowers

Celandine (*Chelidonium majus*). A straggler from Europe now common along roadsides in eastern U. S. Blooms April to September. Its juice is a strong yellow dye.

Black-eyed Susan, or Cone-flower (*Rudbeckia hirta*). In fields Quebec to the Plains and southward. Blooms May to September.



Yellow Star-grass. (*Hypoxis hirsuta*). In dry soil, Maine to the Plains and southward. Blooms May to October.

Jewelweed, Touch-me-not, or Silverleaf (*Impatiens biflora*). In

moist ground, Nova Scotia to Alaska and southward. Blooms July to October.

Yellow Toadflax, or Butter and Eggs (*Linaria Linaria*). In dry waste places, Nova Scotia to Manitoba and south to the Middle States. Blooms June to October.



Evening Primrose (*Onagra biennis*). In dry soil, Labrador to the Rockies and south to Florida. Blooms from June to October. Opens chiefly at night.

Adder's Tongue, or Dog-tooth Violet (*Erythronium Americanum*). In moist woods, Nova Scotia to Minnesota and south-

ward. One of the earliest spring flowers; blooms March to May. Possibly the name was *Adderstung*, from the blotched appearance of the leaves.

Yellow Lady's Slipper (*Cypripedium hirsutum*). In woods, Newfoundland to British Columbia and southward at least to Middle States. A smaller variety is recognized. It blooms May to July.

Goldenrod (*Solidago Canadensis*). Found from Atlantic to the Plains and southward. The emblem flower of America. Blooms August to November. There are some fifty species of Goldenrod recognized in America, so that it is expert work to classify them.

## VI. Red, Purple, or Scarlet Flowers

Cardinal Flower (*Lobelia cardinalis*). In moist soil, New Brunswick to the Plains and southward. Blooms July to September. Brilliant red or scarlet, rarely white.

Red Lily, or Wood Lily (*Lilium Philadelphicum*). In dry woods, Maine to Manitoba and southward to the Middle States. Blooms June and July.

Turk's Cap Lily (*Lilium superbum*). In wet meadows, Maine to Minnesota and southward halfway to the Gulf. Blooms July and August.

Columbine (*Aquilegia Canadensis*). In rocky woods, Nova Scotia to the Plains and southward. Blooms April to July.

Fire Pink (*Silene Virginica*). In dry woods, New York to Minnesota and southward to Middle States. Blooms May to September.

Painted Cup, or Indian Paint-brush (*Castilleja coccinea*). In moist meadows, Maine to Manitoba and southward halfway to the Gulf. Blooms May to July. The flowers are yellowish and inconspicuous; the scarlet is chiefly on the upper leaves.

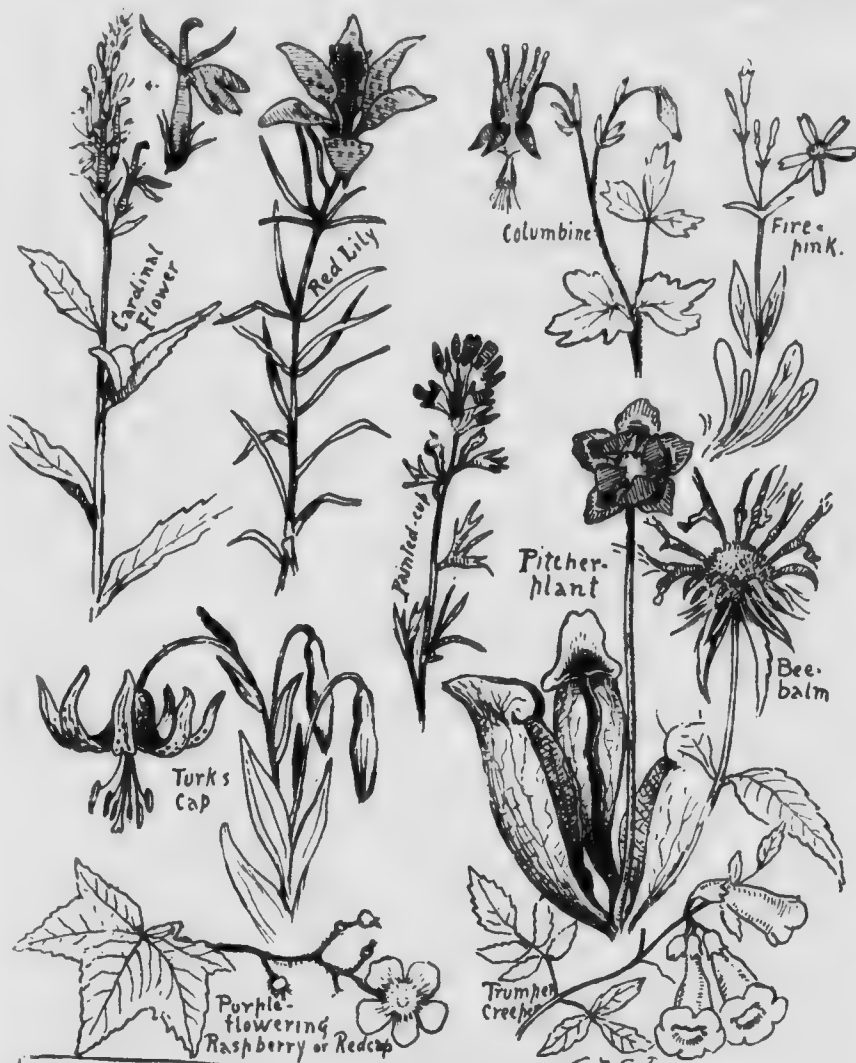
### A Secret

You see that flaming painted cup  
The rich low wood beside;  
Remember this, where'er it grows  
A painted warrior died.

Pitcher Plant (*Sarracenia purpurea*). In peat bogs, Labrador to the Rockies and southward up high. It blooms in May and June.

Bee Balm, or Oswego Tea (*Monarda didyma*). In moist soil, in the East from Ontario to Georgia. Blooms July and September.

Redcap, or Purple Flowering Raspberry (*Rubus odoratus*). On



VI. Red, Purple, or Scarlet Flowers

the edge of woods, Nova Scotia to Michigan and southward half way to the Gulf. Blooms from June to August. Its blooms are worth far more than its berry, which is a thin red cap of fine gravel held together with a little fruit pulp.

Trumpet Creeper (*Tecoma radicans*). In moist woods, New Jersey to Illinois and southward to Texas. Blooms August and September.

## VII. Brownish Purple Flowers

Wild Ginger (*Asarum Canadense*). In rich woods, New Brunswick to Manitoba and southward halfway to the Gulf. Blooms April and May. Its roots are flavored like ginger.

Jack-in-the-pulpit, or Indian Turnip (*Arisaema triphyllum*). In moist woods, Nova Scotia to Minnesota and southward to Gulf States. Its root is frightfully acrid and pungent when raw, but when boiled becomes wholesome food.

Red Trillium, or Smelly Wake-robin (*Trillium erectum*). In woods, Nova Scotia to James' Bay and Manitoba, thence southward halfway to the Gulf. Its color varies from dark purple to pink, green, or white. It blooms from April to June. The name Wake-robin is supposed to mean that it wakes when the robin comes. It has a very bad smell and in consequence country boys call it by simple, sincere, but very vernacular names.

Skunk Cabbage (*Spathyema foetida*). In swamps, Nova Scotia to Minnesota, southward to the Gulf States. Its bloom is the first of all the spring flowers, in moist localities, for it sends its big egg-shaped and purple-mottled bloom into the cold world as early as February, long before its leaves will venture forth. In March and April it is still in flower.

## VIII. Pink Flowers

Wild Geranium, or Crane's Bill (*Geranium maculatum*). In woods, Newfoundland to Manitoba and southward nearly to the Gulf. Blooms from April to July. The name Crane's Bill is from the shape of the seed pod.

Fire Weed, Epilobium, or Spiked Willowherb (*Chamaenerion angustifolium*). In dry sunny places, Labrador to Alaska, and southward at least halfway to the Gulf. So called because of its commonly springing up after a forest fire. Blooms June to September.

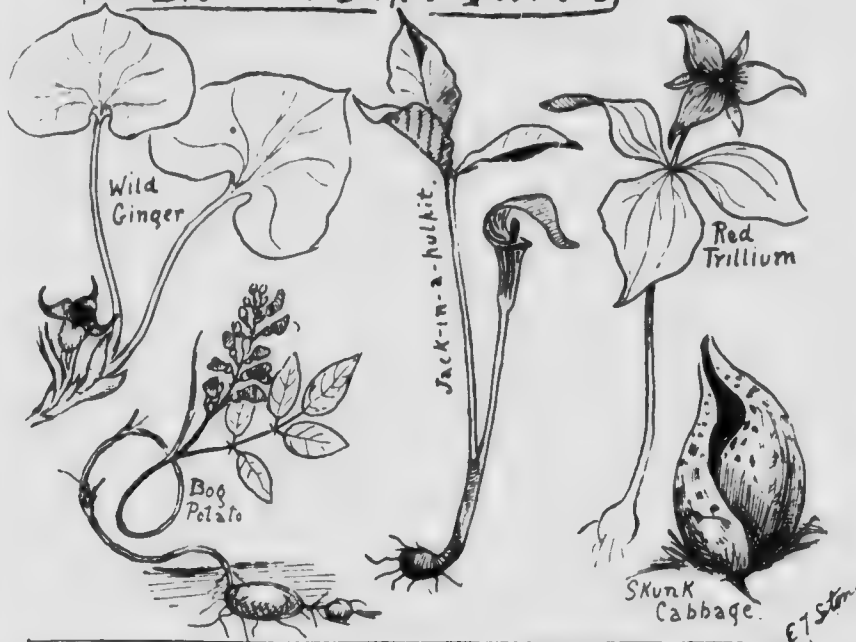
Milkweed (*Asclepias purpurascens*). In dry sunny places Massachusetts to Minnesota and southward halfway to the Gulf. Blooms June to August.

Spotted Pipsissiwa (*Chimaphila maculata*). In dry woods.



Maine to Minnesota and southward nearly to the Gulf States.  
Blooms June to August.

**VII. Brownish Purple Flowers**



**VIII. Pink Flowers.**



**Books Recommended**

- FLOWER GUIDE, Chester A. Reed. Doubleday, Page & Co. \$1.00  
 OUR EARLY WILD FLOWERS, Harriet L. Keeler. Scribners. \$1.50  
 HOW TO KNOW THE WILD FLOWERS, Mrs. Wm. Starr Dana. \$2.00  
 HOW TO KNOW THE FERNS, Frances Theodora Parsons. Scribners. \$1.50

## The Woodcraft Boy in the Forest

I suppose there never was a boy or girl who did not love trees. I remember a little prairie boy in my young days whose idea of heaven was a big tree on the prairie with an angel under it, who never said, "I don't know" when asked a question. A tree has always been a blessed and glorious thing to me. Often I feel the axe chopping into my own soul when I see it laid to some splendid tree that has been selected for destruction. Let every Woodcraft Boy commit to mind that lovely little poem by Joyce Kilmer originally appearing in "Publications of Poetry," and printed in *Boys' Life*, October, 1913.

I think that I shall never see  
A poem lovely as a tree,  
A tree whose hungry mouth is pressed  
Against the Earth's sweet flowing breast,  
A tree that looks at God all day  
And lifts her leafy arms to pray,  
A tree that may in summer wear  
A nest of robins in her hair,  
Upon whose bosom snow has lain:  
Who intimately lives with rain.  
Poems are made by fools like me,  
But only God can make a tree.

There are only three things that can justify the destruction of a tree. These are: we need its lumber, we need its room, or it is breeding plague.

How very seldom nowadays are we justified in destroying little trees, and above all, what a fearful crime becomes the roaring, racing, raging hell known as a *forest fire*.

Four fifths of America's forests have been destroyed by wild fires, which were in most cases preventable—in all cases lamentable. For besides destroying the trees it destroyed thousands of human beings, millions of beautiful, harmless birds and other wild creatures, and utterly ruined the soil of the country beneath.

No one with an ounce of patriotism will be responsible for a wild fire. Wild fire is the demon that we strike at in our sixth law. Oh, Woodcraft Boy, never, never forget your vow to face and fight all wild fire in the woods. It is far worse in some ways than fire in town. For there you are sure to have competent firemen ready at hand, but the forest fire may spread out over a county before its presence is fully realized, and yet a single Woodcraft Boy on the spot when first it begins may stop

it with a bucket of water, the blow of a shovel, or even of a stick.

These are some of the rules that lead to safety:

*Never build a big fire.* There is a certain type of madman who thinks a camp is incomplete without a "bonfire." All such folk should be in jail. No Woodcrafter ever builds a bonfire. It is wasteful, uncomfortable, unsocial, dangerous, and criminal.

Let your fire be the little fire of the cook or the Council Ring. Do not build it on piles of logs, rotten wood, or rubbish, nor near them, nor on bog. Try to have it on the bare ground; and so that you can go all around it on bare ground.

In windy weather or dangerous places dig a hole or wall up the fire with stones, sods, green logs, sand, or other things that do not burn.

Never leave a camp or the campfire without extinguishing *every spark*, using water and plenty of it, if you love your country or the good green woods. Never leave the campfire burning even for a short time without some one there to guard it.

Never throw down burning matches or lighted cigars or cigarettes. I suppose half of the fires come from this cause.

These are offered you as Woodcraft rules, offered that your acceptance may rest on love of the thing protected. But do not forget that any breach of this is listed as crime in the law of the land and may be visited by heavy pains and penalties.

But we hope that the Woodcraft Boy will not need to think of anything but the beauty of the blessed woods and be ready and eager at all times to do his share toward keeping these for the joy of having them.



## FIFTY COMMON FOREST TREES OF EASTERN NORTH AMERICA

White Pine	Yellow Oak, or Chestnut Oak
Red Pine, Canadian Pine, or Norway Pine	Red Oak
Long-leaved Pine, Georgia Pine, Southern Pine, Yellow Pine	Scarlet Oak
Tamarack, or Larch	Black Oak, or Golden Oak
White Spruce	Pin Oak, or Swamp Oak
Hemlock	Beech
Balsam Tree	Chestnut
Bald Cypress	White Elm, Water, or Swamp Elm
Arbor-vitæ, or White Cedar	Slippery Elm
Quaking Asp, or Quiver Leaf	Osage Orange, or Bow-wood
Black Willow	Tulip Tree, White-wood, or Yel- low Poplar
Balsam Poplar or Balm of Gilead	Sassafras
Cottonwood	Sweet Gum, Star-leaved Gum, or Liquidambar
Black Walnut	Sycamore, or Buttonwood
White Walnut	Red-bud, or Judas Tree
Pecan	Sugar Maple, Rock Maple or Hard Maple
Shagbark or Shellbark	Silver Maple or Soft Maple
Mockernut	Red, Scarlet, Water, or Swamp Maple
Pignut Hickory	Box Elder, or Ash-leaved Maple
Gray Birch, or Aspen-leaved Birch	Basswood, White-wood, or Lin- den
White, Canoe, or Paper Birch	Sour Gum, Black Gum, Pepper- idge, or Tupelo
Yellow Birch, or Gray Birch	White Ash
Ironwood, or Hop Hornbeam	Black Ash, Hoop Ash, or Water Ash
Blue Beech, or American Horn- beam	
White Oak	

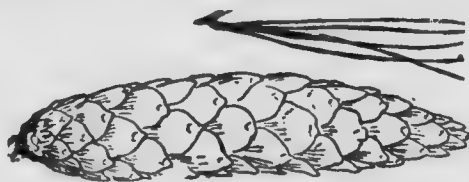


## FIFTY COMMON FOREST TREES OF EASTERN NORTH AMERICA

### White Pine, or Weymouth Pine

(*Pinus Strobus*)

A noble evergreen tree, up to 175 feet high. The lumberman's prize. Its leaves are in bunches of 5, and are 3 to 5 inches long; cones 4 to 8 inches long. Wood pale, soft, straight-grained, easily split. Warps and checks less than any other of



our timbers. A cubic foot weighs 24 lbs. (a cubic foot of water weighs 63 lbs.). Minnesota and Manitoba to Nova Scotia and Pennsylvania.

### Red Pine, Canadian Pine, or Norway Pine

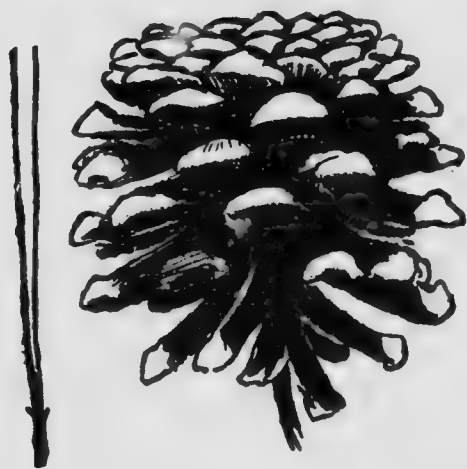
(*Pinus resinosa*)

Evergreen; somewhat less than the White Pine, with leaves 4 to 6 inches long, in bunches of 2, cones  $1\frac{1}{2}$  to  $2\frac{1}{2}$  inches long. Wood darker, harder, and heavier. A cubic foot weighs 30 lbs. Range as above.

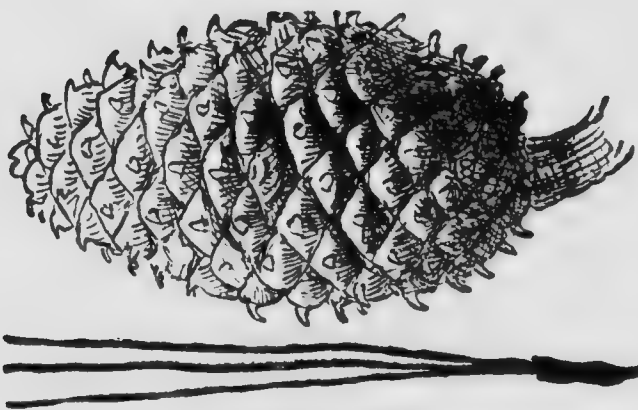
### Long-leaved Pine, Georgia Pine, Southern Pine, Yellow Pine, or Hard Pine

(*Pinus palustris*)

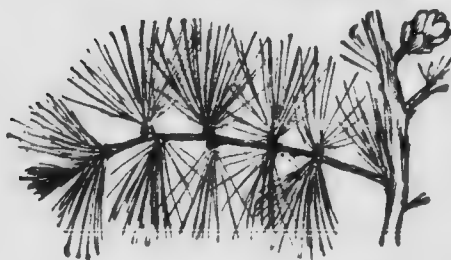
A fine tree, up to 100 feet high; evergreen; found in great forests in the Southern States; it supplies much of our lumber now; and much of our turpentine, tar, and rosin. Wood strong and hard. A cubic foot weighs 40 lbs. Its leaves are 10 to 16



Red Pine



Long-Leafed Pine



Tamarac





inches long, and are in bunches of 3's; cones, 6 to 10 inches long. Range, Virginia to Louisiana and Florida.

### Tamarack, Larch, or Hackmatack

(*Larix laricina*)

A tall, straight tree of the northern swamps yet often found flourishing on dry hillsides. One of the few conifers that shed all their leaves each fall. Leaves  $\frac{1}{2}$  to 1 inch long; cones  $\frac{1}{2}$  to  $\frac{3}{4}$  inch. Wood very resinous, heavy, and hard, "a hard, soft wood" very durable as posts. In Manitoba I have seen tamarack fence posts unchanged after twenty years' wear. It is excellent for firewood, and makes good sticks for a rubbing-stick fire. A cubic foot weighs 39 lbs. Found north nearly to the limit of trees; south to northern New Jersey and Minnesota.

### White Spruce

(*Picea Canadensis*)

Evergreen; 60 to 70 or even 150 feet high. Leaves  $\frac{1}{2}$  to  $\frac{3}{4}$  inch long; cones  $1\frac{1}{2}$  to 2 inches long, are at the tips of the branches



and deciduous; the twigs smooth. Wood white, light, soft, weak, straight-grained, not durable; a cubic foot weighs 25 lbs. Its roots afford the wat-

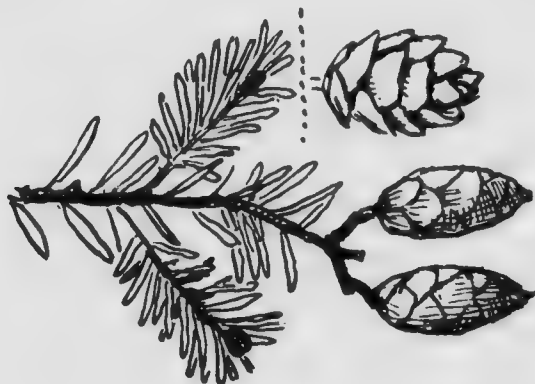
tap or cordage for canoe-building and camp use generally. North to the limit of trees east of Rockies, south to Dakota, Wisconsin, and Maine.

### Hemlock

(*Tsuga Canadensis*)

Evergreen; 60 to 70 feet high; occasionally 100; wood pale, soft, coarse, splintery, not durable. A cubic foot weighs 26 lbs. Bark full of tannin. Leaves  $\frac{1}{2}$  to  $\frac{3}{4}$  inch long; cones about the same. Its knots are so hard that they quickly turn the edge of an axe or gap it as a stone might; these are probably

the hardest vegetable growth in our woods. Wisconsin to Nova Scotia and south on the mountains to Georgia.

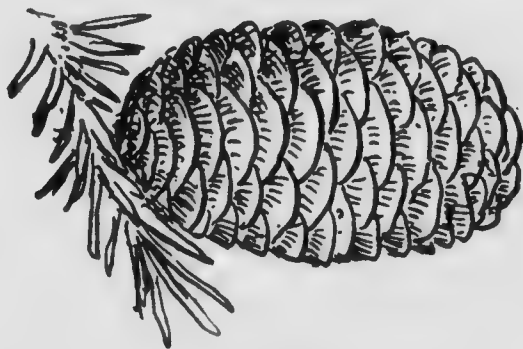


Hemlock

### Balsam Tree, or Canada Balsam

(*Abies balsamea*)

Evergreen; famous for the blisters on its trunk, yielding Canada balsam which makes a woodman's plaster for cuts



Balsam

or a waterproof cement; and for the exquisite odor of its boughs, which also supply the woodman's ideal bed. Its *flat* leafage is distinctive. Wood pale, weak, soft, perishable. A cubic foot weighs 24 lbs. New Alberta to Newfoundland and south to Virginia.

**Bald Cypress**

(*Taxodium distichum*)

A fine forest tree, up to 150 feet, with thin leaves somewhat like those of Hemlock, half an inch to an inch long; cones rounded about an inch through. Sheds its leaves each fall so is "bald" in winter. Noted for the knees or upbent roots that it develops when growing in water. Timber soft, weak, but durable and valuable; a cubic foot weighs 27 lbs. In low wet country of Mississippi Valley and Southeast coast.



**Arbor-vitæ, or White Cedar**

(*Thuja occidentalis*)

Evergreen; 50 to 60 feet high. Wood soft, brittle, coarse-grained, extremely durable as posts; fragrant and very light (the

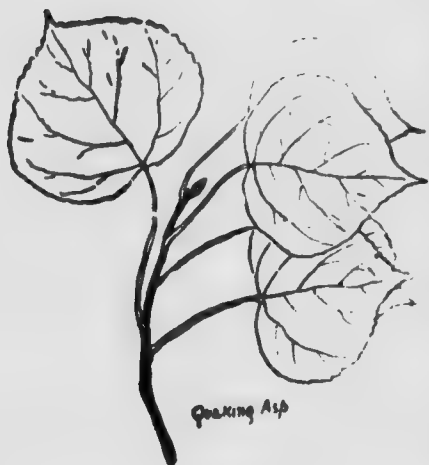


lightest on our list). Makes good sticks for rubbing-stick fire. A cubic foot weighs only 20 lbs. The scale-like leaves are about

6 to 8 to the inch, the cones half an inch long or less. Manitoba to Nova Scotia, and Pennsylvania; south on mountains to North Carolina.

### Quaking Asp, Quiver Leaf, Aspen Poplar, or Popple

(*Populus tremuloides*)

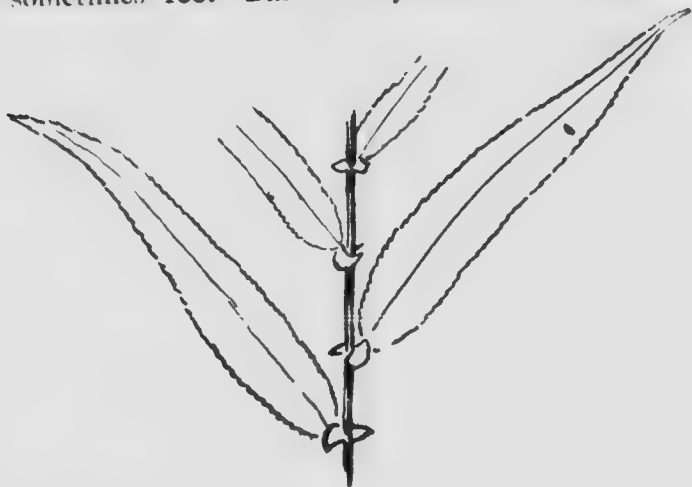


A small forest tree, but occasionally 100 feet high. Readily known by its smooth bark, of a light green or whitish color. The wood is pale, soft, close-grained, weak, perishable, and light. A cubic foot weighs 25 lbs. Good only for paper pulp, but burns well when seasoned. When green it is so heavy and soggy that it lasts for days as a fire check or back-log. Leaves  $1\frac{1}{2}$  to 2 inches long. Canada and Northern States.

### Black Willow

(*Salix nigra*)

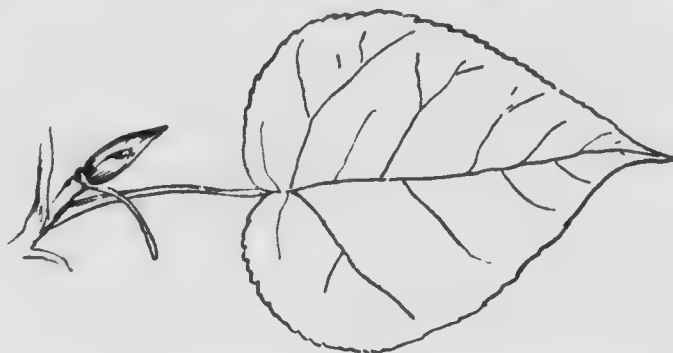
The common Willow of stream-banks, usually 20 to 40 feet high, sometimes 100. Bark nearly black. Its long, narrow,



yellow-green shining leaves are sufficiently distinctive. A decoction of Willow bark and roots is said to be the best known substitute for quinine. Noted for early leafing and late shedding; leaves 3 to 6 inches long. Wood pale, weak, soft, close-grained; a cubic foot weighs 28 lbs. Manitoba to Nova Scotia and south to Gulf.

**Balsam Poplar, Balm of Gilead, or Tacamahac**  
(*Populus balsamifera*)

Fifty or 60 feet ordinarily, but sometimes 100 feet high. Bark rough and furrowed. The great size of the buds and



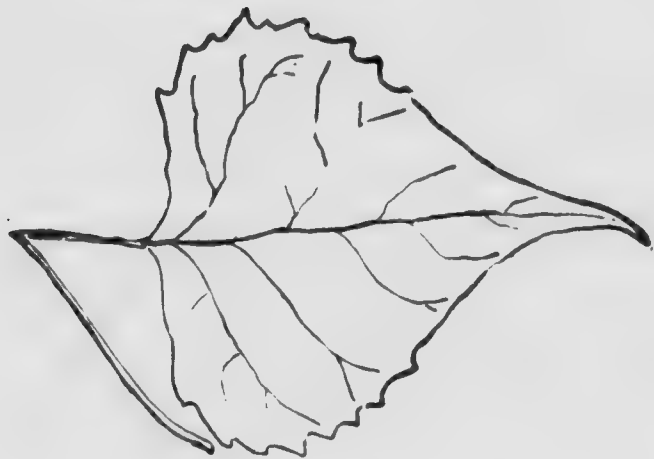
their thick shiny coat of fragrant gum are strong marks. Wood much as in the preceding, but weighs 23 lbs. a cubic foot. Leaves 3 to 6 inches long. Canada and Northern States.

**Cottonwood**  
(*Populus deltoides*)

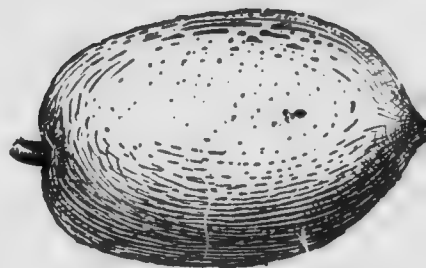
Small and rare in the Northeast. Abundant and large in West; even 150 feet high. Wood as in other poplars but weighs 24 lbs. a cubic foot. Leaves 3 to 5 inches long. Maine to Georgia and west to Alberta.

**Black Walnut**  
(*Juglans nigra*)

A magnificent forest tree up to 150 feet high; usually much smaller in the East. Wood a dark purplish brown or gray; hard, close-grained; strong; very durable in weather or ground



Fruit of black walnut.



Fruit of butternut.

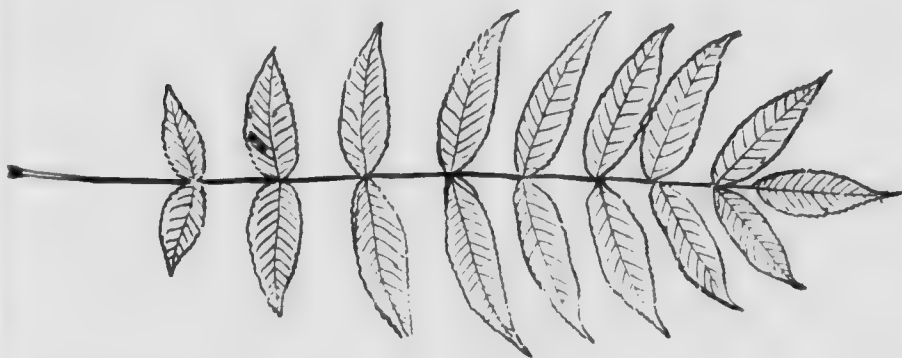
Both life size.

work, and heavy. A cubic foot weighs 38 lbs. Leaflets 13 to 23; and 3 to 5 inches long. Fruit nearly round,  $1\frac{1}{2}$  to 3 inches in diameter. Massachusetts to Minnesota and south to Mississippi.

### White Walnut, Oil Nut, or Butternut

(*Juglans cinerea*)

Much smaller than the last, rarely 100 feet high; with much smoother bark and larger, coarser, compound leaves, of fewer leaflets but the petioles or leaflet stalks, and the new twigs, are covered with sticky down.

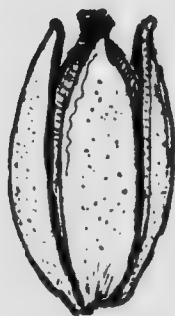


The wood is light brown, soft, coarse, not strong but very enduring in weather and ground work; light; leaves 15 to 30 inches long; leaflets 11 to 19 in number and 3 to 5 inches long; fruit oblong, 2 to 3 inches long. Nova Scotia to Minnesota and south to Mississippi.

### Pecan

(*Hicoria Pecan*)

A tall slender forest tree in low moist soil along streams, up to 170 feet in height: famous for its delicious nuts, they are smooth and thin shelled; fruit, oblong, cylindrical,  $1\frac{1}{2}$  to  $2\frac{1}{2}$  inches long. Its leaves are smooth when mature; leaflets 11 to 15, and 4 to 7 inches long; wood hard and brittle, a cubic foot weighs 45 lbs. Central Mississippi Valley.



Pecan



**Shagbark, Shellbark, or  
White Hickory**

(*Hicoria ovata*)

A tall forest tree up to 120 feet high. Known at once by the great angular slabs of bark hanging partly detached from its main trunk,

forced off by the growth of wood, but too tough to fall. Its leaves are 8 to 14 inches long, with 5 to 7 broad leaflets. The wood is very light in color, close-grained, tough, and elastic. It makes an excellent bow; is the best of fuel. A cubic foot weighs 52 lbs. Dakota to Maine and south to Mississippi.



**Mockernut, White Heart, or Big-bud Hickory**

(*Hicoria alba*)

A tall forest tree, up to 100 feet. Wood much like that of Shagbark, but not quite so heavy (51 lbs.). Its bark is smooth



and furrowed like that of the Pignut. Its leaves are like those of the Shagbark, but it has 7 to 9 leaflets, instead of 5 to 7; it has a large terminal bud  $\frac{1}{2}$  to  $\frac{3}{4}$  of an inch long, and the leaves have a resinous smell. Its nut in the husk is nearly 2 inches long; the nut shell is 4-ridged toward the point, has a very thick shell, and small, sweet kernel. Maine to Oklahoma and Florida.



**Pignut Hickory**

(*Hicoria glabra*)

A tall forest tree; 100 and up to 120 feet high. Wood much as in the Mockernut; bark smooth and furrowed; not loose



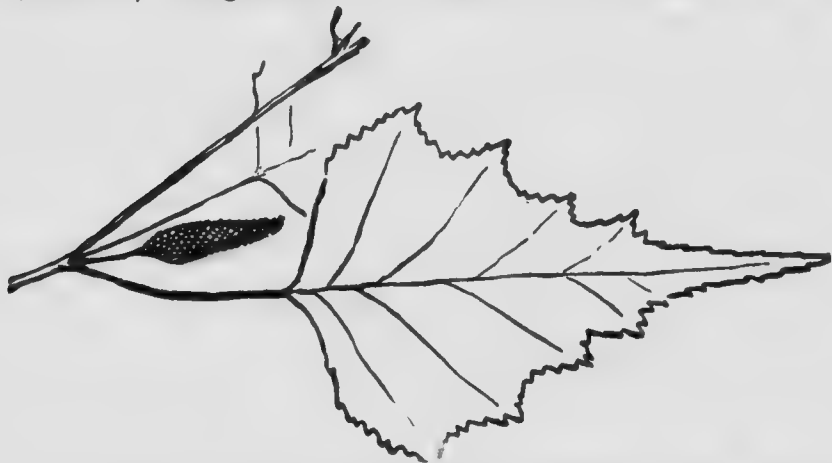
plates. Leaves 8 to 12 inches long. Nut slightly or not at all angular, very thick shelled; the pear shape of fruit is a strong

feature,  $1\frac{1}{4}$  to 2 inches long. Maine to Nebraska and south to the Gulf.

### Gray Birch, or Aspen-leaved Birch

(*Betula populifolia*)

A small tree found on dry and poor soil; rarely 50 feet high. Wood soft, close-grained, not strong, splits in drying, useless for

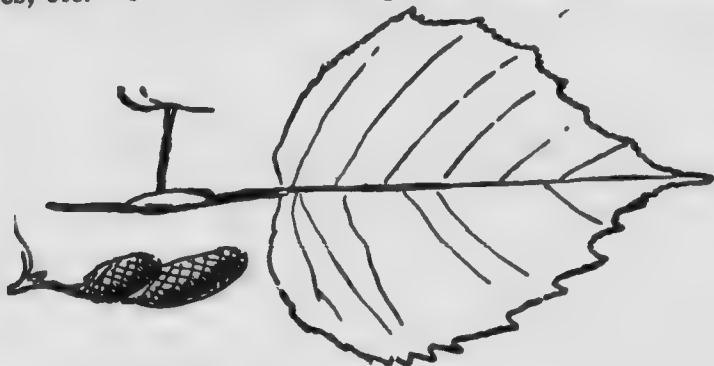


weather or ground work. A cubic foot weighs 36 lbs. Leaves 2 to 3 inches long. It has a black triangular scar at each armpit. Quebec south to Maryland.

### White, Canoe, or Paper Birch

(*Betula papyrifera*)

A tall forest tree up to 80 feet high; the source of bark for canoes, etc. One of the most important trees in the northern

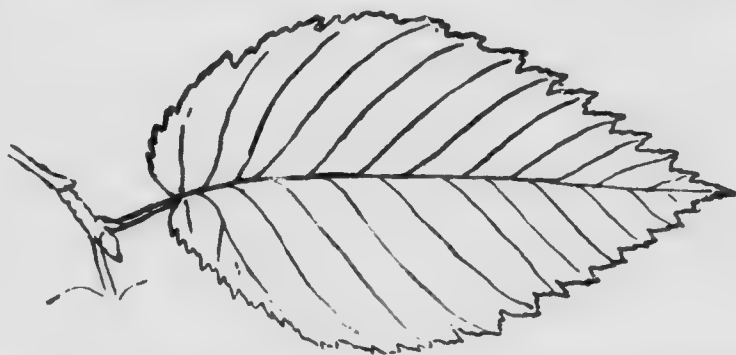


forest. Besides canoes, wigwams, vessels, and paper from its bark, it furnishes syrup from its sap and the inner bark is used as an emergency food. Every novice rediscovers for himself that the outer bark is highly inflammable as well as waterproof, and ideal for fire-lighting. Though so much like the Gray Birch, it is larger, whiter, and with but small black scars at each limb. The timber is much the same, but this weighs 37 lbs. Its leaf and catkin distinguish it; the former is 2 to 3 inches long. All Canada and south to Illinois.

### Yellow Birch, or Gray Birch

(*Betula lutea*)

A forest tree, of 30 to 50 feet in height. Bark obviously birch, but shaggy and gray or dull yellow. Wood as in the others, but



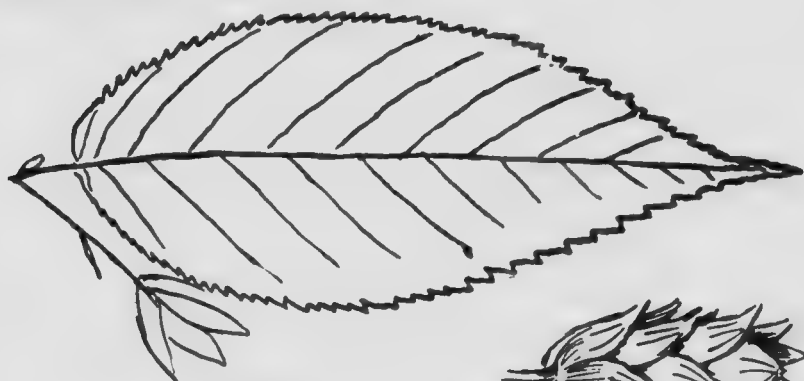
reddish. A cubic foot weighs 41 lbs. Leaves 3 to 4 inches long. Minnesota to Newfoundland and south to Virginia.

### Ironwood, Hard-hack, Leverwood, Beetle-wood, or Hop Hornbeam

(*Ostrya Virginiana*)

A small tree; 20 to 30, rarely 50, feet high; named for its hardness and its hoplike fruit. Bark furrowed. Wood tough, close-grained, unsplittable. One of the strongest, heaviest, and hardest of timbers. A cubic foot weighs over 51 lbs. That is, it comes near to Shagbark Hickory in weight and perhaps goes beyond it in strength and hardness. Leaves

3 to 5 inches long. Fruit  $1\frac{1}{2}$  to  $2\frac{1}{2}$  inches long. Dakota to Nova Scotia and south to Gulf.



Ironwood

### Blue Beech, Water Beech, or American Hornbeam

(*Carpinus Caroliniana*)

A small tree, 10 to 25, rarely 40, feet high; bark smooth. Wood hard, close-grained, very strong; much like Ironwood,



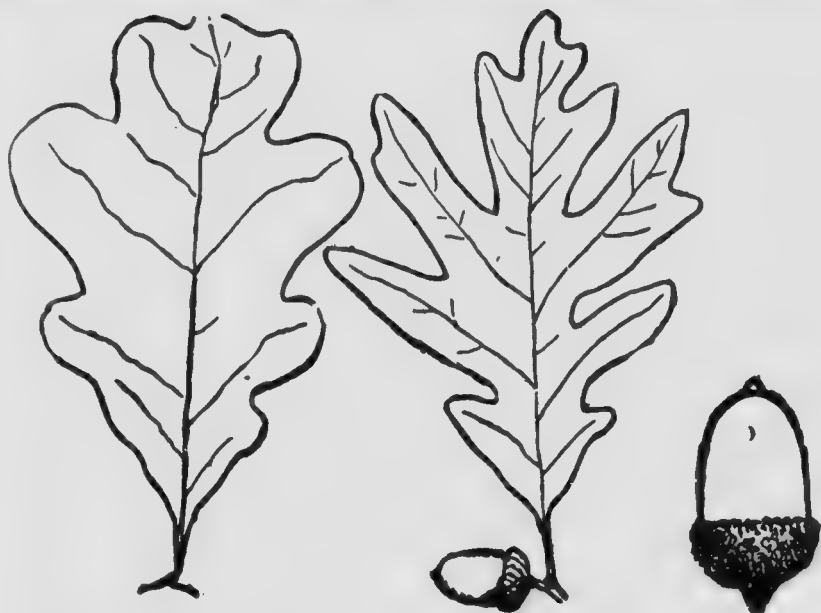
but lighter. A cubic foot weighs 45 lbs. Leaves 3 to 4 inches long. United States east of Missouri River.

### White Oak

(*Quercus alba*)

A grand forest tree; over 100 feet up to 150 feet high. The finest and most valuable of our oaks. The one perfect timber

for shipbuilders, farmers, and house furnishers. Its wood is pale, strong, tough, fine-grained, durable, and heavy. A cubic foot weighs 46 lbs. I found that when green it weighed 68 lbs.

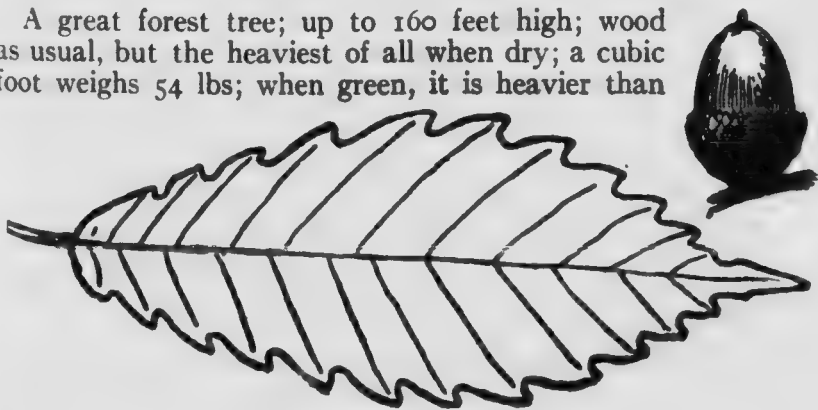


to the cubic foot and of course sank in water like a stone. Called white from pale color of bark and wood. Leaves 5 to 9 inches long. Texas to Minnesota and easterly.

**Yellow Oak, Chestnut Oak, or Chinquapin Scrub Oak**

(*Quercus Muhlenbergii*)

A great forest tree; up to 160 feet high; wood as usual, but the heaviest of all when dry; a cubic foot weighs 54 lbs; when green, it is heavier than

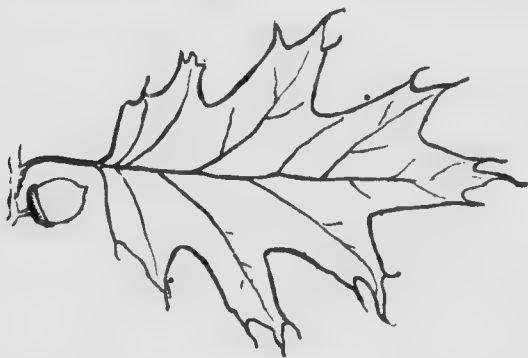


water, and sinks at once. It is much like the Chestnut Oak but its leaves are narrower, more sharply saw-edged, and its acorns much smaller, about half the size. Its acorns ripen in one season. Leaves 4 to 6 inches long. Louisiana to Iowa and east-erly to Massachusetts.

### Red Oak

(*Quercus rubra*)

A fine forest tree, 70 to 80, or even 140, feet high. Wood reddish brown. Sapwood darker. Hard, strong, coarse-grained,



heavy. A cubic foot weighs 41 lbs. It checks, warps, and does not stand for weather or ground work. The acorn takes two seasons to ripen. Apparently all those oaks whose nuts take *two* seasons to ripen have wood that soon rots. The low, flat shape of the cup is distinctive; in fact, it has no cup, it has a saucer; leaves 4 to 8 inches long. Missouri to Minnesota and east to Atlantic.

### Scarlet Oak

(*Quercus coccinea*)

Seventy to 80 or even 160 feet high. Scarlet from its spring and autumn foliage color. The leaves are a little like those of the Black Oak, but are frondlike with three or four deep, nearly even, cuts on each side. The acorns of this can be easily matched among those of the Black Oak, but the kernel of the Scarlet is white, that of the Black is yellow; they take two seasons to ripen. Wood much as in Red Oak but weighs 46 lbs. per cubic

foot. Leaves 4 to 8 inches long. Massachusetts to Georgia and Iowa.



Scarlet Oak

**Black Oak, Golden Oak, or Quercitron**

(*Quercus velutina*)

Seventy to 80 or even 150 feet high. The outer bark is very rough, bumpy, and blackish; inner bark yellow. This yields



a yellow dye called *quercitron*. The leaf is of the Scarlet Oak style, but has uneven cuts and usually a large solid area in the outer half. The wood is hard, coarse-grained, checks,

and does not stand for weather or ground work. A cubic foot weighs 44 lbs. Wisconsin to Maine and south to Gulf.

### Pin Oak, or Swamp Oak

(*Quercus palustris*)

Fifty to 70 or even 120 feet high, in swampy land. Wood hard, coarse-grained, very strong and tough. Will not stand

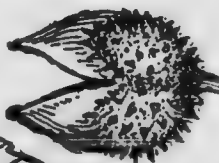
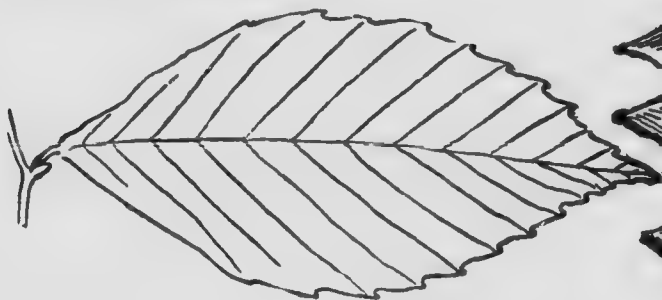


exposure next to ground. A cubic foot weighs 34 lbs. Its acorns take two seasons to ripen. Leaves 4 to 6 inches long. In moist woods and along swamp edges. Massachusetts to Iowa and Arkansas.

### Beech

(*Fagus grandifolia*)

In all North America there is but one species of Beech. It is a noble forest tree, 70 to 80, and occasionally 120, feet high; readily distinguished by its unfurrowed ashy gray bark. Wood hard, strong, tough, close-grained, pale, heavy. Leaves 3 to 4 inches long. A cubic foot weighs 43 lbs. Wisconsin to Nova Scotia and south to Gulf.





**Chestnut**  
(*Castanea dentata*)

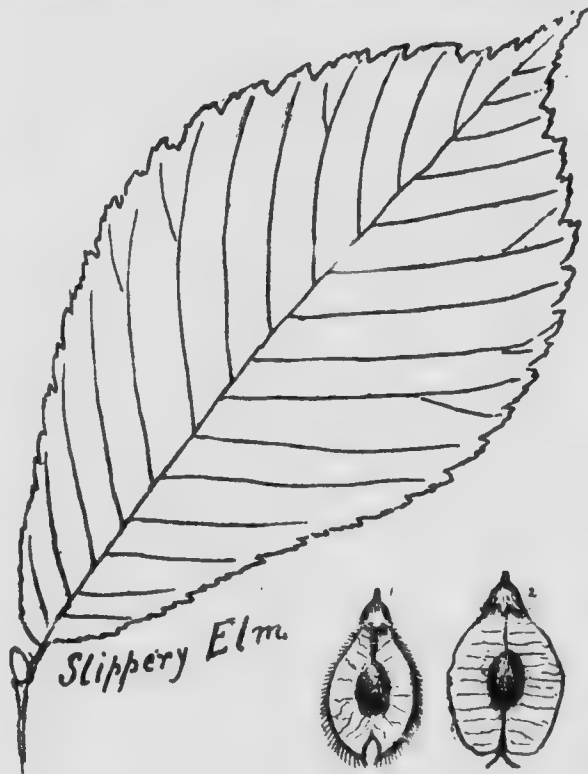
A noble tree, 60 to 80 or even 100 feet high. A cubic foot of the wood weighs 28 lbs. Leaves 6 to 8 inches long. Massachusetts to Indiana and Mississippi.

**White Elm, Water, or Swamp Elm**  
(*Ulmus Americana*)

A tall, splendid, forest tree; commonly 100, occasionally 120, feet. Wood reddish brown; hard, strong, tough, very hard to split. A cubic foot weighs 41 lbs. Soon rots near the ground. Leaves 2 to 5 inches long. Manitoba to Nova Scotia and south to Gulf.

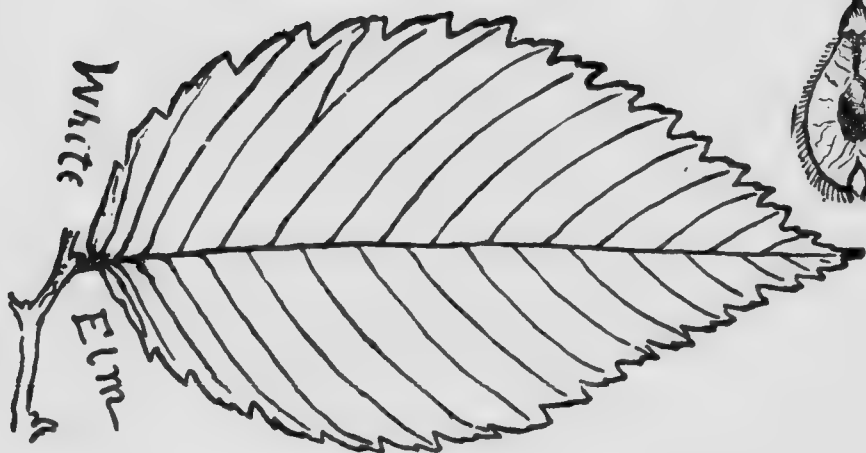
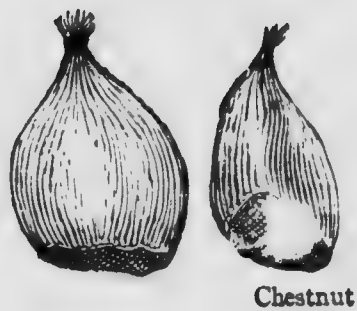
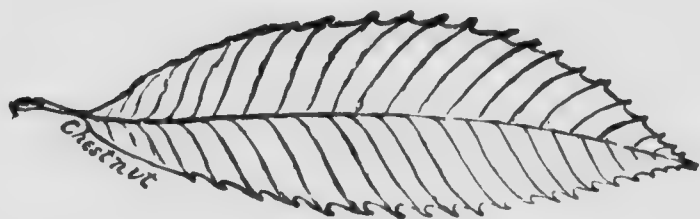
**Slippery Elm, Moose, or Red Elm**  
(*Ulmus fulva*)

Smaller than White Elm, maximum height about 70 feet. Wood dark, reddish, hard, close, tough, strong; durable next



1. White Elm
2. Slippery Elm
3. Cock Elm
4. Wahoo Elm

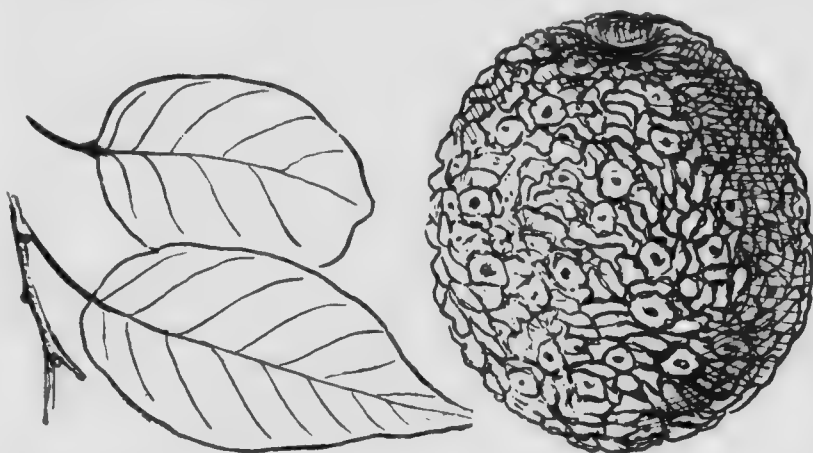




the ground; heavy; a cubic foot weighs 43 lbs. Its leaves are *larger and rougher* than those of the former. Four to 8 inches long, and its buds are hairy, not smooth. Maine to Minnesota and south to Gulf.

**Osage Orange, Bodarc (Bois D'arc), or Bow-wood**  
(*Toxylon pomiferum*)

A small tree, rarely 60 feet high. Originally from the middle Mississippi Valley, now widely introduced as a hedge tree.



Famous for supplying the best bows in America east of the Rockies. Wood is bright orange; very hard, elastic, enduring and heavy. Leaves 3 to 6 inches long. A cubic foot weighs 48 lbs.

**Tulip Tree, White-wood, Canoe Wood, or Yellow Poplar**  
(*Liriodendron tulipifera*)

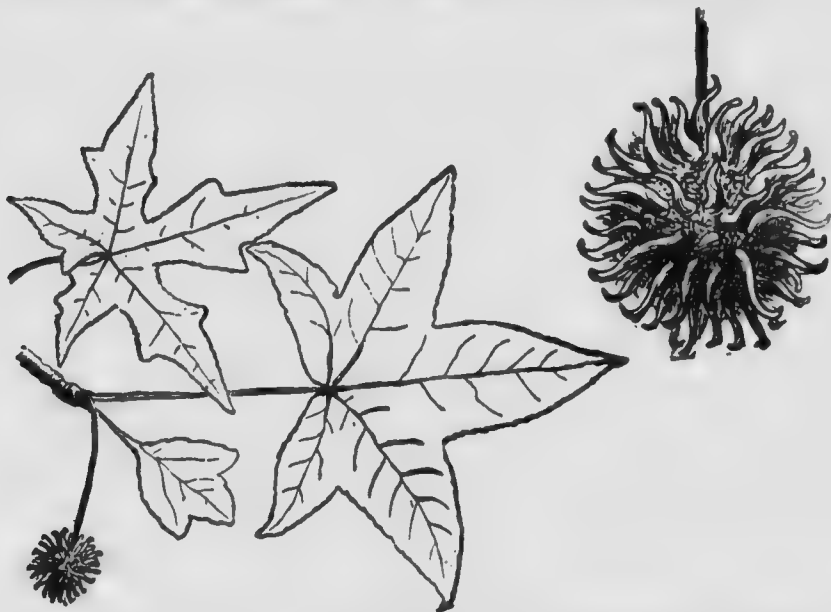
One of the noblest forest trees, ordinarily 100 feet, and sometimes 150 feet, high. Noted for its splendid, clean, straight column; readily known by leaf, 3 to 6 inches long, and its tulip-like flower. Wood soft, straight-grained, brittle, yellow, and very light; much used where a broad sheet easily worked is needed but will not stand exposure to the weather; is poor fuel; a dry cubic foot weighs 26 lbs. Mississippi to Atlantic, Lake Ontario to Gulf. See page 307.

**Sassafras, or Ague Tree***(Sassafras sassafras)*

Usually a small tree of dry sandy soil, but reaching 125 feet high in favorable regions. Its wood is dull orange, soft, weak, coarse, brittle, and light. A cubic foot weighs 31 lbs. Very durable next the ground. Leaves 4 to 7 inches long. Maine to Iowa and Texas to Atlantic See next page.

**Sweet Gum, Star-leaved, or Red Gum, Bilsted, Alligator Tree, or Liquidambar***(Liquidambar styraciflua)*

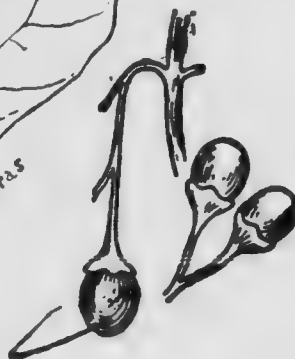
A tall tree up to 150 feet high of low, moist woods, remarkable for the corky ridges on its bark, and the unsplitable nature



of its weak, warping, perishable timber. Heart-wood reddish brown, sap white; heavy, weighing 37 lbs. to cubic foot. Leaves 3 to 5 inches long. Massachusetts to Missouri and south to Gulf.

**Sycamore, Plane Tree, Buttonball, or Buttonwood***(Platanus occidentalis)*

One of the largest of our trees; up to 140 feet high; commonly hollow. Wood light brownish, weak; hard to split; heavy for



feet  
weak,  
Very  
laine

ator

mark-  
ature

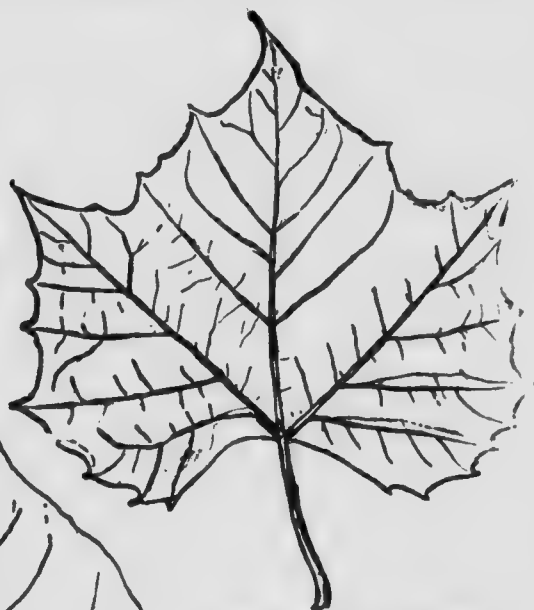
ddish  
eaves  
Gulf.

monly  
y for

its strength. A cubic foot weighs 35 lbs. Little use for weather work. Famous for shedding its bark as well as its leaves. Leaves 4 to 9 inches long. Canada to the Gulf.

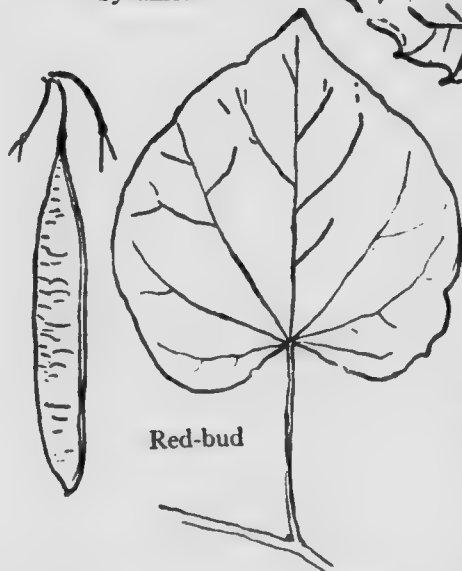


Sycamore



Red-bud, or Judas Tree

(*Cercis Canadensis*)



Red-bud

Small tree of bottom lands, rarely 50 feet high; so called from its abundant spring crop of tiny rosy blossoms, coming before the leaves, the latter 2 to 6 inches broad. "Judas tree" because it blushed

when Judas hanged himself on it (Keeler). Its wood is dark, coarse, and heavy.

A cubic foot weighs 40 lbs. Maryland to Iowa and southward.

### Sugar Maple, Rock Maple, or Hard Maple

(*Acer saccharum*)

A large, splendid forest tree, 80 to 120 feet high; red in autumn. Wood hard, strong, tough, and heavy but not durable.

A cubic foot weighs 43 lbs. It enjoys with Beech, Hickory, etc., the sad distinction of being a perfect firewood. Thanks to this it has been exterminated in some regions.

Bird's-eye and curle. Maple are freaks of the grain. Leaves



3 to 5 inches long. Its sap produces the famous maple sugar. Manitoba to Nova Scotia and south to Gulf.

### Silver Maple, White, or Soft Maple

(*Acer saccharinum*)

Usually a little smaller than the Sugar Maple and much inferior as timber. Wood hard, close-grained. A cubic foot



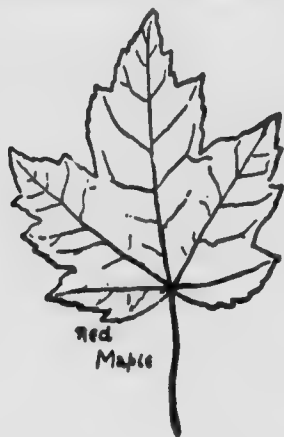
weighs 33 lbs. Leaves 5 to 7 inches long. This tree produces a little sugar. It is noted for its yellow foliage in autumn.

Nova Scotia to Minnesota and south to Oklahoma and Georgia.

### Red, Scarlet, Water, or Swamp Maple

(*Acer rubrum*)

A fine tree the same size as the preceding. Noted for its flaming crimson foliage in fall, as well as its red leaf-stalks, flowers, and fruit earlier. Its wood is light-colored, tinged reddish, close-grained, smooth with varieties of grain, as in Sugar Maple; heavy. A cubic foot weighs 39 lbs. Leaves 2 to 6 inches long. Quebec to Minnesota and south to Gulf.



Box Elder

### Box Elder, or Ash-leaved Maple

(*Acer Negundo*)

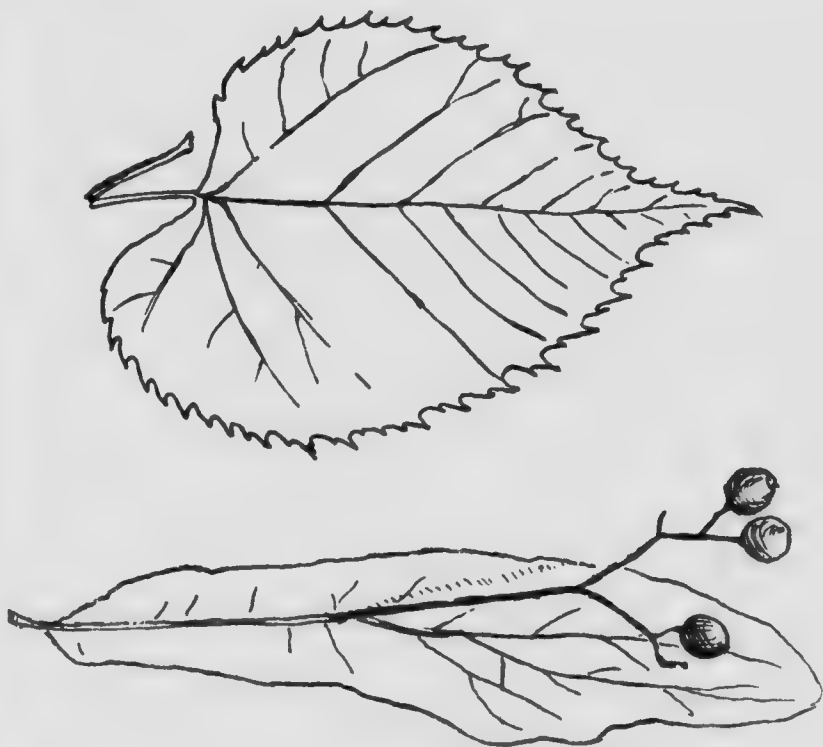
A small tree, 40 to 50 up to 70 feet high, found chiefly along streams. Wood pale, soft, close-grained, light. A cubic foot



weighs 27 lbs. Poor fuel. Makes paper-pulp. Leaflets 2 to 4 inches long. Massachusetts to British Columbia south to Mexico and Alabama.

**Basswood, White-wood, Whistle-wood, Lime, or Linden**  
(*Tilia Americana*)

A tall forest tree 60 to 125 feet; usually hollow when old. Wood soft, straight-grained, weak, white, very light. A cubic foot weighs 28 lbs. It makes a good dugout canoe or sap trough.



The hollow trunk, split in halves, was often used for roofing. Poor firewood, and soon rots, makes good rubbing-sticks for friction fire. Its inner bark supplies coarse cordage and matting. Its buds are often eaten as emergency food. Leaves 2 to 5 inches wide. Manitoba to Nova Scotia and south to Texas.

**Sour Gum, Black Gum, Pepperidge, or Tupelo***(Nyssa sylvatica)*

A forest tree up to 110 feet high; in wet lands. Wood pale, very strong, tough, unsplitable, and heavy. A cubic foot weighs



40 lbs. Used for turner work, but soon rots next the ground. Leaves 2 to 5 inches long. Massachusetts to Wisconsin and south to Gulf.

**White Ash***(Fraxinus Americana)*

A fine forest tree on moist soil; 70 to 90 or even 130 feet high. Wood pale brown, tough, and elastic. Used for handles,



springs, bows, also arrows and spears; heavy. A cubic foot weighs 41 lbs. Soon rots next the ground. Called white for

the silvery under sides of the leaves; these are 8 to 12 inches long; each leaflet 3 to 5 inches long. Mississippi Valley and east to Atlantic.

### Black Ash, Hoop Ash, or Water Ash

(*Fraxinus nigra*)

A tall forest tree of swampy places; 70, 80, or rarely 100 feet high. Wood dark brown, tough, soft, coarse, heavy. A cubic



foot weighs 39 lbs. Soon rots next to the ground. Late in the spring to leaf, and early to shed in the fall. The leaves are 12 to 16 inches long; its leaflets, except the last, have no stalk, they number 7 to 11, are 2 to 6 inches long. Nova Scotia to Manitoba and south to Virginia.

### Books Recommended

TREES OF THE NORTHERN UNITED STATES, Austin C. Apgar. Price, \$1.00, American Book Co.

THE FORESTER'S MANUAL, or Forest trees of Eastern North America, a fully illustrated Manual with map showing range of each species. By Ernest Thompson Seton, published by Doubleday, Page & Co., net, \$.50.

OUR NATIVE TREES, by Harriet L. Keeler, 1900. Charles Scribner's Sons, New York City. Price, \$2.00.

## THE STARS AS THE CAMPER SEES THEM

(See Plate of Stars and Principal Constellations)

So far as there is a central point in our heavens, that point is the Pole-star, Polaris. Around this star all the stars in the sky seem to turn once in twenty-four hours.

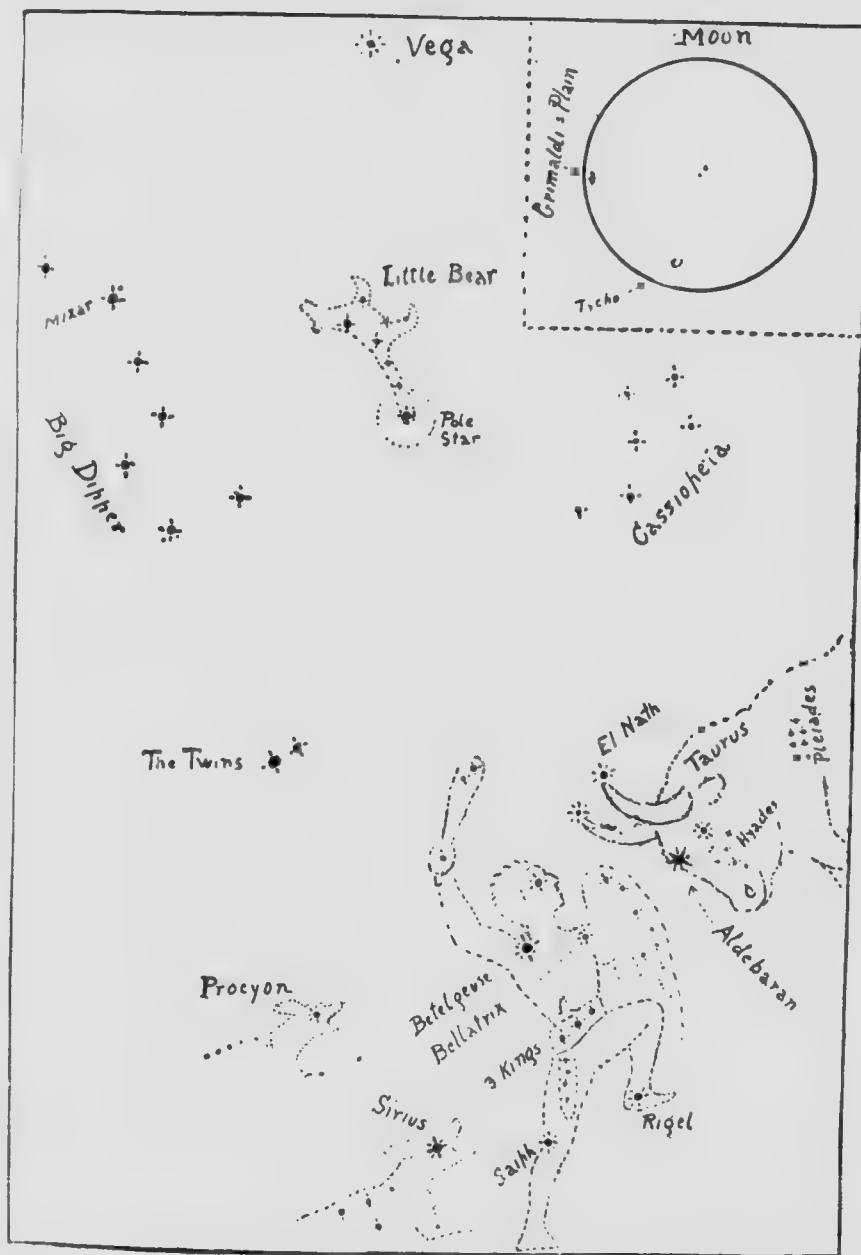
It is easily discovered by the help of the Big Dipper, or Great Bear, known to every country boy and girl in the northern half of the world. This is, perhaps, the most important star group in our sky, because of its size, peculiar form, the fact that it never sets in our latitude, and that of its stars, two, sometimes called the Pointers, always point out the Pole-star. It is called the Dipper because it is shaped like a dipper with a long, bent handle.

Why it is called the Great Bear is not so easy to explain. The classical legend has it that the nymph, Calisto, having violated her vow, was changed by Diana into a bear, which, after death, was immortalized in the sky by Zeus. Another suggestion is that the earliest astronomers, the Chaldeans, called these stars "the shining ones," and their word happened to be very like the Greek *arktos* (a bear). Another explanation is that vessels in olden days were named for animals, etc. They bore at the prow the carved effigy of the namesake, and if the Great Bear, for example, made several very happy voyages by setting out when a certain constellation was in the ascendant, that constellation might become known as the *Great Bear's* constellation. Certainly, there is nothing in its shape to justify the name. Very few of the constellations, indeed, are like the thing they are called after. Their names were usually given for some fanciful association with the namesake, rather than for resemblance to it.

The Pole-star is really the most important of the stars in our sky; it marks the north at all times; all the other stars seem to swing around it once in twenty-four hours. It is in the end of the Little Bear's tail; this constellation is sometimes called the Little Dipper. But the Pole-star, or Polaris, is not a very bright one, and it would be hard to identify but for the help of the Pointers of the Big Dipper.

The outside stars (Alpha and Beta) of the Dipper point nearly to Polaris, at a distance equal to about five times the space that separates these two stars of the Dipper's outer side.

Indian names for the Pole-star are the "Home Star," and "The Star That Never Moves," and the Big Dipper they call the "Broken Back."



The Great Bear is also to be remembered as the hour-hand of the woodman's clock. It goes once around the North Star in about twenty-four hours, the same way as the sun, and for the same reason—that it is the earth that is going and leaving them behind.

The time in going around is not exactly twenty-four hours, so that the position of the Pointers varies with the seasons, but, as a rule, this for Woodcraft purposes is near enough. The bowl of the Dipper swings four fifths of the width of its own opening in one hour. If it went a quarter of the circle, that would mean you had slept a quarter of a day, or six hours.

Every fifteen days the stars seem to be an hour earlier; in three months they gain one fourth of the circle, and in a year gain the whole circle.

According to Flammarion, there are about seven thousand stars visible to the naked eye, and of these twenty are stars of the first magnitude. Fourteen of them are visible in the latitude of New York, the others (those starred) belong to the South Polar region of the sky. The following table of the brightest stars is taken from the Revised Harvard Photometry of 1908, the best authority on the subject.

### The First Twenty Stars in Order of Brightness

1. Sirius, the Dog Star.
2. \*Canopus, of the Ship.
3. \*Alpha, of the Centaur.
4. Vega, of the Lyre.
5. Capella, of the Charioteer.
6. Arcturus, of the Herdsman.
7. Rigel, of Orion.
8. Procyon, the Little Dog-star.
9. \*Achernar, of Eridanus.
10. \*Beta, of the Centaur.
11. Altair, of the Eagle.
12. Betelgeuze, of Orion's right shoulder.
13. \*Alpha, of the Southern Cross.
14. Aldebaran, of the Bull's right eye.
15. Pollux, of the Twins.
16. Spica, of the Virgin.
17. Antares, of the Scorpion.
18. Fomalhaut, of the Southern Fish.
19. Deneb, of the Swan.
20. Regulus, of the Lion.

## Other Constellations

### Orion

Orion (O-ri-on), with its striking array of brilliant stars, Betelgeuze, Rigel, the Three Kings, etc., is generally admitted to be the finest constellation in the heavens.

Orion was the hunter giant who went to Heaven when he died, and now marches around the great dome, but is seen only in the winter, because, during the summer, he passes over during daytime. Thus he is still the hunter's constellation. The three stars of his belt are called the "Three Kings."

Sirius, the Great Dog-star, is in the head of Orion's Hound, the constellation *Canis Major*, and following farther back is the Little Dog star, Procyon, the chief star of the constellation *Canis Minor*.

In old charts of the stars, Orion is shown with his hounds, hunting the bull, Taurus. This constellation is recognizable by this diagram; the red star, Aldebaran, being the angry right eye of the Bull. His face is covered with a cluster of little stars called the *Hyades*, and on his shoulder are the seven stars, called *Pleiades*.

### Pleiades

*Pleiades* (Ply-a-des) can be seen in winter as a cluster of small stars between Aldebaran and Algol, or, a line drawn from the back bottom, through the front rim of the Big Dipper, about two Dipper lengths, touches this little group. They are not far from Aldebaran, being in the right shoulder of the Bull. They may be considered the seven arrow wounds made by Orion.

Serviss tells us that the *Pleiades* have a supposed connection with the Great Pyramid, because "about 2170 B. C., when the beginning of spring coincided with the culmination of the *Pleiades* at midnight, that wonderful group of stars was visible just at midnight, through the mysterious southward-pointing passage of the Pyramid.

### Cassiopeia

On the opposite side of the Pole-star from the Big Dipper, and nearly as far from it, is a W of five bright stars. This is called *Cassiopeia's Chair*. It is easily found and visible the year round on clear nights.

Thus we have described ten constellations from which the Woodcrafter may select the number needed to qualify, namely,

the Little Bear or Little Dipper, the Big Dipper or Big Bear, Cassiopeia's Chair, Orion, the Bull, Orion's Hound, Orion's Little Dog, the Pleiades and the Hyades; the Lyre (later).

### The Moon

The moon is one fourth the diameter of the earth, about one fiftieth of the bulk, and is about a quarter of a million miles away. Its course, while very irregular, is nearly the same as the apparent course of the sun. It is a cold, solid body, without any known atmosphere, and shines by reflected sunlight.

The moon goes around the earth in twenty-seven and a quarter days. It loses about fifty-one minutes in twenty-four hours; therefore it rises that much later each successive night on the average, but there are wide deviations from this average, as, for example, the time of the Harvest and Hunter's moons in the fall, when the full moon rises at nearly the same time for several nights in succession.

According to most authorities, the moon is a piece of the earth that broke away some time ago; and it has followed its mother around ever since.

The hole it left in its place is supposed to be the North Pacific Ocean.

### The Stars as Tests of Eyesight

In the sky are several tests of eyesight which have been there for some time and are likely to be. The first is the old test of Mizar and Alcor. Mizar, the Horse, is the star at the bend of the handle of the Dipper. Just above it is a very small star that astronomers call Alcor, or the rider.

The Indians call these two the "Old Squaw and the Pappoose on Her Back." In the old world, from very ancient times, these have been used as tests of eyesight. To be able to see Alcor with the naked eye means that one had excellent eyesight. So also on the plains, the old folks would ask the children at night, "Can you see the pappoose on the old squaw's back?" And when the youngster saw it, and proved that he did by a right description, they rejoiced that he had the eyesight which is the first requisite of a good hunter.

### THE PLEIADES

One of the oldest of all eye tests is the Pleiades. Poor eyes see a mere haze, fairly good see five, good see six, excellent see seven.



The rarest eyesight, under the best conditions, see up to ten; and, according to Flammarion, the record with unaided eyes is thirteen.

## VEGA, OF THE LYRE

If one draw a line from through the back wall of the Dipper, that is, from the back bottom star, through the one next the handle, and continue it upward for twice the total length of the Dipper, it will reach Vega, the brightest star in the northern part of the sky, and believed to have been at one time the Pole-star—and likely to be again. Vega, with the two stars near it, form a small triangle. The one on the side next the North Star is called Epsilon. If you have remarkably good eyes, you will see that it is a double star.

## THE NEBULA IN ORION'S SWORD

Just about the middle of Orion's Sword is a fuzzy light spot. This might do for blood, only it is the wrong color. It is the nebula of Orion. If you can see it with the naked eye, you are to be congratulated.

## ON THE MOON

When the moon is full, there is a large, dark, oval spot on it to the left, as you face it, and close to the east rim, almost halfway up; this is the Plain of Grimaldi; it is about twice the size of the whole State of New Jersey; but it is proof of a pair of excellent eyes if you can see it at all.

## Books Recommended

THE BOOK OF STARS, by R. F. Collins. D. Appleton & Co. Price, \$1.00  
AROUND THE YEAR WITH THE STARS, by Garrett P. Serviss. Harpers. Price, \$1.00

THE UNIVERSITY OF CHICAGO

## BIRDS

### Forty Birds That Every V. after Should Know

The Bald Eagle, or White-headed Eagle	Yellow-billed Cuckoo
Golden, or War Eagle	Whippoorwill
Red-tailed Hawk, or Red-tail	Hungary Partridge
The Barred, or Great Owl	Blue Jay
Great Horned Owl, or Great Owl	Common Crow
Screech Owl	Bobolink, or Reedbird
Turkey Vulture, or Buzzard	Baltimore Oriole
Loo	Purple Grackle, or Crow Blackbird
Common Seagull	Snowbird
Pelican	Song-Sparrow
Wild Duck, or Mallard	Scarlet Tanager
Wood Duck, or Summer Duck	Purple Martin
Wild Goose, Canada Goose, or Honker	Barn Swallow
Swan	Mockingbird
Blue Heron	Catbird
Bobwhite	Common House Wren
Guinea Fowl, or Partridge	Chickadee
	Wood Thrush
	Robin
	Bluebird

THE UNIVERSITY OF CHICAGO

## BIRDS

### Forty Birds That Every Woodcrafter Should Know

*The Bald Eagle, or White-headed Eagle (Haliaeetus leucocephalus)*, is the emblem of America. It is three to four feet from beak to tail, and six or seven feet across the wings. When fully adult it is known by its white head, neck, and tail, and the brown body; but when young it is brownish black, splashed and marked with dull white.

The only other eagle found in the United States is the *Golden, or War Eagle (Aquila chrysaetos)*. This is a little larger. When full grown it is dark brown, with the basal half of tail more or less white. The plumage of the young birds is somewhat like that of the young Bald Eagle; but the two species may always be distinguished by the legs. The War Eagle wears leggings—his legs are feathered to the toes. He is ready for the warpath. The Bald Eagle has the legs bald, or bare on the lower half.

*Redtailed Hawk, or Henhawk (Buteo borealis)*. The common hawks of America are very numerous and not easy to distinguish. The best known of the large kinds is the Redtail. This is about two feet long and four feet across the wings. In general it is dark brown above and white beneath, with dark brown marks; the tail is clear reddish with one black bar across near the tip. In young birds the tail is gray with many small bars. It has four primaries notched on the inner web. The legs are bare of feathers for a space above the toes. It is common in North America east of the Rockies up to mid-Canada. It does much good, killing mice and insects. It is noted for its circling flight and far-reaching whistle or scream.

*The Barred, or Hoot Owl (Strix varia)*. This Owl is known at once by the absence of horns, the black eyes, and the plumage barred across the chest and striped below that. It is about twenty inches long, in general gray-brown marked with white. It is noted for its loud hooting; it is the noisiest owl in our woods. Found in the wooded parts of America up to about latitude 50 degrees, east of the Plains.

*Great Horned Owl, or Cat Owl (Bubo Virginianus)*. This is the largest of our Owls. About twenty-four inches long and four feet across the wings. It is known at once by its great ear tufts, its yellow eyes, its generally barred plumage of white, black and buff, and its white shirt front. This is the winged tiger of the woods. Noted for its destruction of game and poultry, it is found throughout the timbered parts of North America.

*Screech Owl (Otus asio)*. This is not unlike the Horned Owl in shape and color but is much smaller—only ten inches long. Sometimes its plumage is red instead of gray. It feeds on mice and insects and has a sweet mournful song in the autumn—its



Bald Eagle



Redtailed Hawk or Henhawk

lament for the falling leaves. It is found in the timbered parts of North America.

*Turkey Vulture, or Buzzard (Cathartes aura)*. The Turkey Vulture is about two and a half feet long and about six feet across its wings. It is black everywhere except on the under side of the wing which is gray, and the head which is naked and red. It is known at once by the naked head and neck, and is famous for its splendid flight. It is found from Atlantic to Pacific and north to the Saskatchewan. It preys on carrion.

In the Southern States is another species—the Black Vulture



Barred or Hoot Owl.



Great Horned Owl.



Turkey Vulture or Buzzard.

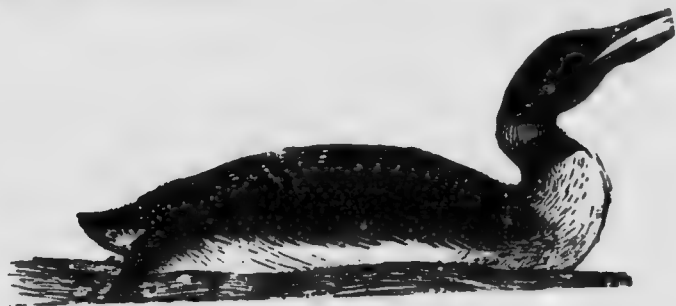


Screech Owl.

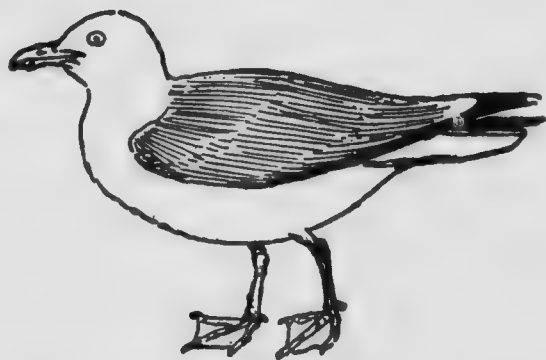
or Carrion Crow—which is somewhat smaller and wears its coat collar up to its ears instead of low on the neck; also its complexion is dusky, not red.

*Loon* (*Gavia immer*). The common Loon is known by its size—thirty-two inches long and about four feet across the wings—and its brilliant black-and-white plumage. It is noted for its skill as a fisher and diver. Its weird rolling call is heard on every big lake in the country.

*Common Seagull* (*Larus argentatus*). The common Seagull is twenty-four inches long and four feet across. The plumage is



Loon

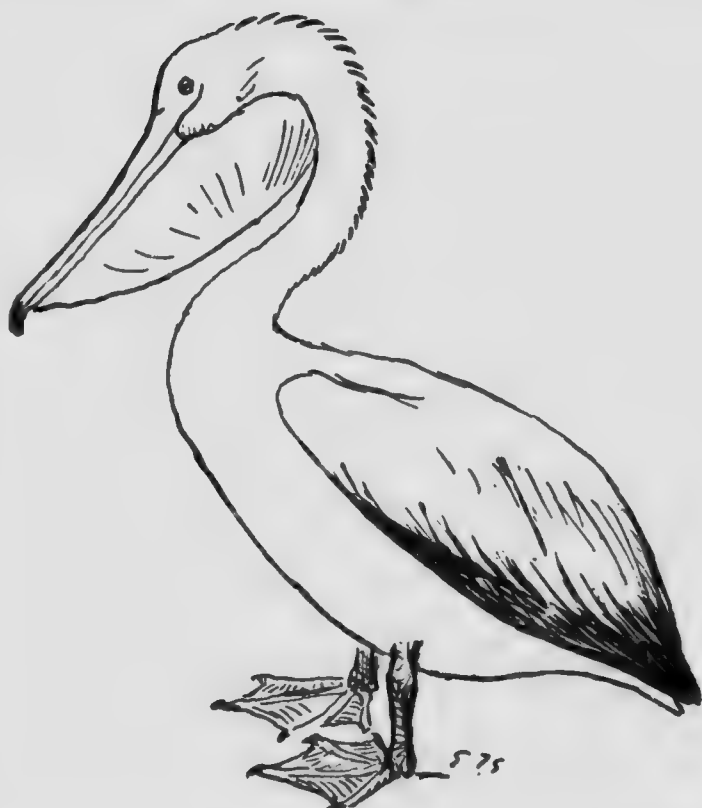


Common Seagull

white with blue-gray back, when adult; but splashed brown when young, and with black tips to the wings. Its beak is yellow with red spot on the lower mandible. It is found throughout North America.

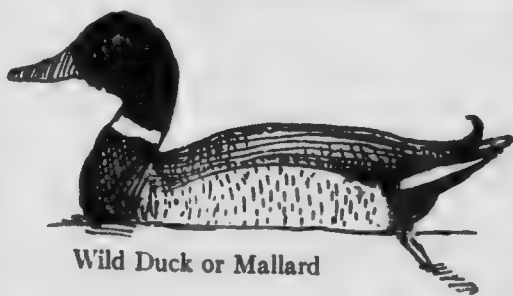
*Pelican* (*Pelecanus erythrorhynchos*). The white Pelican is known at once by its great size—about five feet long and eight feet across the wings—by its long beak, its pouch, and its feet fully webbed. Its plumage is white, but the wing tips are black. It is found in the interior of America up to Great Slave Lake.





Pelican

*Wild Duck, or Mallard (Anas platyrhynchos).* Of all our num-



Wild Duck or Mallard

erous wild ducks this is the best known. It is about twenty-three inches long. Its bottle-green head, white collar, chestnut breast, penciled sides, and curled-up tail feathers identify it. The female is streaky brown and

gray. It is found in all parts of the continent, up to the edge of the forest. This is the wild duck from which tame ducks are descended.

*Wood Duck, or Summer Duck (Aix sponsa).* This beautiful duck is about eighteen inches long. Its head is beautifully variegated, bottle-green and white. Its eye is red, its breast

purplish chestnut, checkered with white spots, while its sides are buff with black pencilings. This is one of the wildest



Wood Duck, or Summer Duck

and most beautiful of ducks. It nests in hollow trees and is found in North America up to about latitude 50 degrees.

**Wild Goose** (*Branta Canadensis*). This fine bird is about three feet long. Its head and neck are black; its cheek patch white; its body gray; its tail black with white coverts above and below. It is found up to the Arctic regions, and breeds north of about latitude 45 degrees. It is easily tamed and reared in captivity.



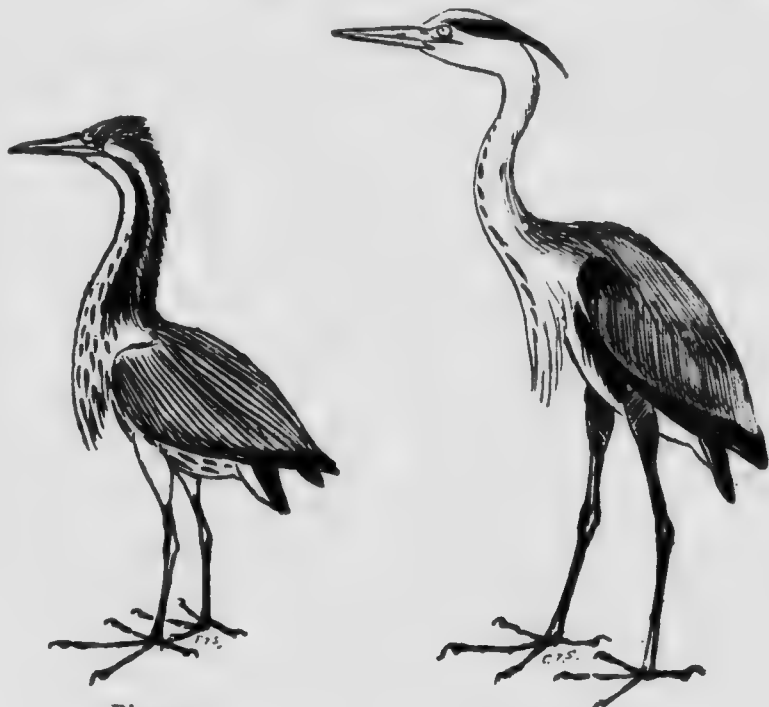
Wild Goose, Canada Goose, or Honker

**Swan.** There are two kinds of Swan found in America: The Trumpeter (*Olor buccinator*), which is almost extinct, is very large and has a black bill, and the Whistling Swan (*Olor Columbianus*), which is smaller—about five feet long and seven feet across. Its plumage is pure white; its bill black, with a yellow spot near the eye. It is

found generally throughout North America but is rare now.

**Bittern** (*Botaurus lentiginosus*) This bird of marshes is about twenty-eight inches long and can stand nearly three feet high. Its general color is warm yellowish brown splashed with dark brown. The black mark on the side of the neck is a strong feature, and its bright green legs and beak are very distinctive. It is famous for its guttural call notes in the marshes, and is found throughout North America up to about latitude 60 degrees in the interior.

*Great Blue Heron (Ardea herodias)*. This bird is commonly called Blue Crane. Its great size will distinguish it. It is about 4 feet from tip of beak to tip of tail. In general it is blue-gray above, white below; head, white, with black hind head, crest and marks on neck and shoulders. Its thighs are chest-



Bittern

Great Blue Heron

nut. It is found throughout North America to the limit of heavy timber.

*Quail, or Bobwhite (Colinus Virginianus)*. This famous and delicate game bird is about ten inches long. Its plumage is beautifully varied with reddish brown, lilac, and black markings, on a white ground. Its whistle sounds like "Bob White." It is found in eastern North America up to Massachusetts and South Ontario.

*Ruffed Grouse, or Partridge (Bonasa umbellus)*. It is known by its mottled and brown plumage, its broad and beautiful fan tail, and the black ruffs on each side of the neck. It is noted for its drumming, which is usually a love song—a call to its mate. Found in the heavy woods of North America, north of the Gulf States.

*Dove* (*Zenaidura macroura*). This is an abundant inhabitant of the farming country as far north as wheat is now grown. It is about twelve inches long, and known by its pigeon-like look, and its long, wedge-shaped tail, with black and white marks on the feathers. Its breast is soft purplish gray. Its extinct relation, the once plentiful Passenger Pigeon, was eighteen inches long and had a reddish breast.

*Downy Woodpecker* (*Dryobates pubescens*). About six and a half inches long, black and white. In the male the nape is



Quail or Bobwhite



Ruffed Grouse or Partridge

red, the outer tail feathers white with black spots. Carefully distinguish this from its large relation the Hairy Woodpecker, which is nine and a half inches long and has no black spots on the white outer tail feathers. A familiar inhabitant of orchards the year round, it is found in woods throughout eastern North America.

*Flicker, or Highhole* (*Colaptes auratus*). This large and beautiful Woodpecker is twelve inches long. Its head is ashy gray behind, with a red nape in the neck, and brown-gray in front. On its breast is a black crescent. The spots below and the little bars above are black, and the under side of wings and tail are bright yellow. The rump is white. Its beautiful plumage and loud splendid "clucker" cry make it a joy in every woodland. It is found throughout North America, east of the Rockies up to the limit of trees.

*Ruby-throated Hummingbird* (*Trochilus colubris*). Every one knows the Hummingbird. The male only has the throat of ruby color. It is about four inches long from tip of beak to

tip of tail. This is the only Hummingbird found in the Northern States or Canada east of the Prairies.

**Kingbird** (*Tyrannus tyrannus*). This bird is nearly black in its upper parts, white underneath, and has a black tail with white tip. Its concealed crest is orange and red. It is eight and a half inches long. Famous for its intrepid attacks on all birds, large and small, that approach its nest, it is found in North America east of the Rockies, into southern Canada.

**Bluejay** (*Cyanocitta cristata*). This bird is soft purplish blue above, and white underneath. The wings and tail are bright



Dove



Flicker



Downy  
Woodpecker



Kingbird

blue with black marks. It is found in the woods of America east of the Plains to about latitude 55 degrees. The Bluejay is a wonderful songster and mimic, but it is mischievous—nearly as bad as the crow indeed.

*Common Crow* (*Corvus brachyrhynchos*). The Crow is black from head to foot, body and soul. It is about eighteen inches



Bluejay



Bobolink,  
or Reedbird

long and thirty wide. It makes itself a nuisance in all the heavily wooded parts of eastern North America.

*Bobolink, or Reedbird* (*Dolichonyx oryzivorus*). This bird is about seven and a half inches long. The plumage is black and white, with brown or creamy patch on nape; and the tail feathers all sharply pointed. The female, and the male in autumn, are all yellow buff with dark streaks. Though famous for its wonderful song as it flies over the meadows in June, it is killed by the thousands to supply the restaurants in autumn and served up under the name Reedbird. It is found in North America, chiefly between north latitude 40 and 52 degrees.

*Baltimore Oriole* (*Icterus galbula*). The Oriole is about eight inches long, flaming orange in color, with black head and back and partly black tail and wings. The female is duller in plumage. Famous for its beautiful nest, as well as its gorgeous plumage and ringing song, it is abundant in eastern North America in open woods up to northern Ontario and Lake Winnipeg.

*Purple Grackle, or Crow Blackbird* (*Quiscalus quiscula*). This northern bird of paradise looks black at a distance but its head is shiny blue and its body iridescent. It is twelve inches long. When flying it holds its long tail with the edge raised like a boat, hence "boat tail." In various forms it is found throughout the Eastern States, and in Canada up to Hudson Bay.



Baltimore Oriole



Purple Grackle, or Crow Blackbird

*Snowbird* (*Plectrophenax nivalis*). About six and a half inches long, this bird is pure white, overlaid with brown on the crown, back, and sides. The wings, back, and tail are partly black. The Snowbird nests in the Arctic regions and is common in most of temperate agricultural America, during winter, wherever there is snow.



Snowbird



Song-Sparrow



Scarlet Tanager

*Song-Sparrow (Melospiza melodia).* The Song-Sparrow is about six and a half inches long—brown above—white underneath. It is thickly streaked with blackish marks on flanks, breast, and all upper parts. All the tail feathers are plain brown. There is a black blotch on the jaw and another on the middle of the breast. Always near a brook. It is noted for its sweet



Purple Martin



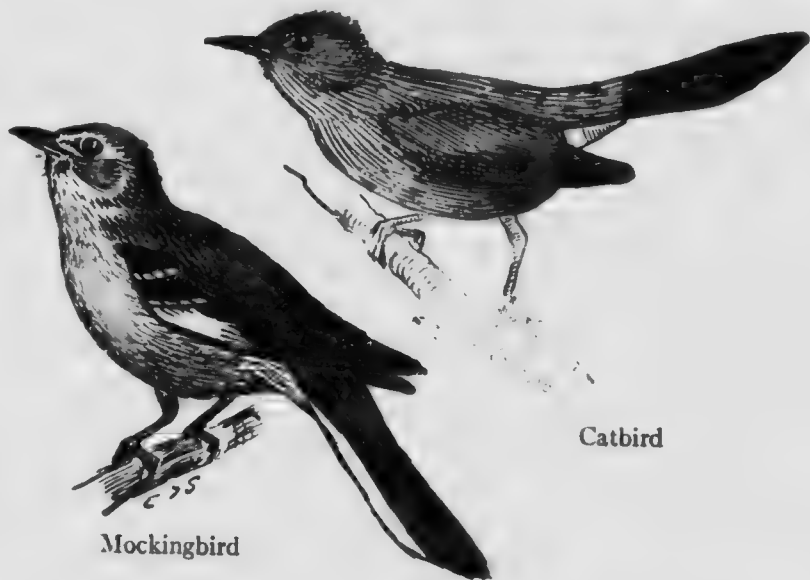
Barn Swallow



and constant song, and is found in all well wooded and watered parts of North America.

**Scarlet Tanager** (*Piranga erythromelas*). This gorgeous bird is about seven inches long. The plumage of the male is of a flaming scarlet, with black wings and tail; but the female is dull green in color. The Scarlet Tanager is found in the woods of eastern America, up to Ottawa and Lake Winnipeg.

**Purple Martin** (*Progne subis*). About eight inches in length, with long wings and forked tail, the Purple Martin is everywhere of a shiny bluish or purplish black. Like the Kingbird it attacks any intruder on its lower range. This swallow is found in the



Mockingbird

Catbird

wooded regions of east temperate America, north to Newfoundland and the Saskatchewan.

**Barn Swallow** (*Hirundo erythrogaster*). About seven inches long, this bird is steel-blue above, chestnut on throat and breast, buffy white on belly. It is known by the long forked tail which is dark with white spots. Famous for its mud nest, it is found in open country about barns in America generally.

**Mockingbird** (*Mimus polyglottos*). About ten inches long, soft gray above, dull white beneath, wings and tail black and white, with **no** black on head- the Mockingbird is famous for its song, and is found in United States north to New Jersey.

**Catbird** (*Dumetella Carolinensis*). This northern Mocking-

bird is about nine inches long, dark slate in color, with a black-brown cap, black tail, and a red patch "on the seat of its pants." It abounds in the Eastern States and Canada, north to Ottawa, Saskatchewan, and British Columbia.

*Common House Wren (Troglodytes aëdon)*. This little fairy is about five inches long; soft brown above and brownish gray below, it is barred with dusky brown on wings and tail. It nests in a hole, and is found in wooded America east of the Plains, north to Saskatchewan, Ottawa, and Maine.

*Chickadee (Penthestes atricapillus)*. This cheerful little bird is five and a half inches long. Its cap and throat are black.



Common House Wren



Wood Thrush



Chickadee

Its upper parts are gray, its under parts brownish, its cheeks white, no streaks anywhere. It does not migrate, so it is well known in the winter woods of eastern America up to the Canadian region where the Brown-capped or Hudson Chickadee takes its place. Its familiar song *chickadee dee dee* has given it its name.

*Wood Thrush (Hylocichla mustelinus)*. About eight inches long, cinnamon-brown above, brightest on head, white below,

with black spots on breast and sides, this Thrush is distinguished from the many thrushes in America, much like it, by the reddish head and round black spots on its under sides. It is found in the woods of eastern North America up to Vermont and Minnesota.

*Robin* (*Planesticus migratorius*). The Robin is about ten inches long, mostly dark gray in color, but with black on head



Robin



Bluebird

and tail; its breast is brownish red. The spots about the eye, also the throat, the belly, and the marks in outer tail feathers are white. Its mud nest is known in nearly every orchard. Found throughout the timbered parts of America north to the limit of trees.

*Bluebird* (*Sialia sialis*). About seven inches long, brilliant blue above, dull red-brown on breast, white below. Found in eastern North America, north to about latitude 50 degrees in the interior, not so far on the coast.

## Books Recommended

WATER BIRDS, LAND BIRDS EAST OF ROCKIES, AND LAND BIRDS WEST OF ROCKIES, Chester A. Reed. Doubleday, Page & Co. Price, \$1.00 each volume. (Popular.)

HANDBOOK OF THE BIRDS OF EASTERN NORTH AMERICA, by F. M. Chapman. Appleton, N. Y. Price, \$3.00. (Technical.)

HANDBOOK OF BIRDS OF THE WESTERN UNITED STATES, by Florence Merriam Bailey. Houghton, Mifflin & Co. Price, \$3.50. (Technical.)

BIRD HOMES, by A. R. Dugmore. Doubleday, Page & Co. Price, \$3.50. (Popular.)

BIRDS THAT HUNT AND ARE HUNTED, by Neltje Blanchan. Doubleday, Page & Co. Price, \$3.50. (Popular.)

## SNAKES, GOOD AND BAD

Snakes are to the animal world what toadstools are to the vegetable world—wonderful things, beautiful things, but fear-some things, because some of them are deadly poison.

Taking Mr. Raymond L. Ditmars\* as our authority, we learn that out of one hundred and eleven species of snakes found in the United States, seventeen are poisonous. They are found in every state, but are most abundant in the Southwest.

These may be divided into Coral Snakes, Moccasins, and Rattlers.

The Coral Snakes are found in the Southern States. They are very much like harmless snakes in shape, but are easily distinguished by their remarkable colors, "broad alternating rings of red and black, the latter bordered with very narrow rings of yellow."

The Rattlesnakes are readily told at once by the rattle.

But the Moccasins are not so easy. There are two kinds: the Water Moccasin, or Cotton-mouth, found in South Carolina, Georgia, Florida, Alabama, and Louisiana, and the Copperhead, which is the Highland, or Northern Moccasin or Pilot Snake, found from Massachusetts to Florida and west to Illinois and Texas.

Here are distinguishing marks: The Moccasins, as well as the Rattlers, have on each side of the head, between the eye and nostril, a deep pit.

The pupil of the eye is an upright line, as in a cat; the harmless snakes have a round pupil.

The Moccasins have a single row of plates under the tail, while the harmless snakes have a double row.

The Water Moccasin is dull olive with wide black transverse bands.

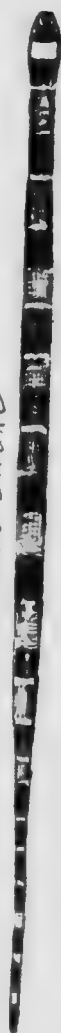
The Copperhead is dull hazel brown, marked across the back with dumb-bells of reddish brown, the top of the head more or less coppery.

Both Moccasins and Rattlers have a flat triangular head, which is much wider than the thin neck; while most harmless snakes have a narrow head that shades off into the neck.

\*This article is chiefly a condensation of his pamphlet on "Poisonous Snakes of the United States," and is made with his permission and approval.

# Types of Poisonous Snakes

*Coral Snake*



*Copperhead*



*Moccasin*



*Pigmy Rattler*



*Timber Rattler*



*Diamond-back Rattler*



*Emerald Snake*



Rattlesnakes are found generally distributed over the United States, southern Ontario, southern Alberta, and Saskatchewan.

### How Does a Snake Bite?

Remember, the tongue is a feeler, not a sting. The "stinging" is done by two long hollow teeth, or fangs, through which the poison is squirted into the wound.

The striking distance of a snake is about one third the creature's length, and the stroke is so swift that no creature can dodge it.

The snake can strike farthest and surest when it is ready coiled, but can strike a little way when travelling.

You cannot disarm a poisonous snake without killing it. If the fangs are removed others come quickly to take their place. In fact, a number of small, half-grown fangs are always waiting ready to be developed.

### In Case of Snake Bite

First, keep cool, and remember that the bite of American snakes is seldom fatal if the proper measures are followed.

You must act at once. Try to keep the poison from getting into the system by a tight bandage on the arm or leg (it is sure to be one or the other) just above the wound. Next, get it out of the wound by slashing the wound two or more ways with a sharp knife or razor at least as deep as the puncture. Squeeze it—wash it out with permanganate of potash dissolved in water to the color of wine. Suck it out with the lips (if you have no wounds in the mouth it will do you no harm there). Work, massage, suck, and wash to get all the poison out. After thorough treatment to remove the venom the ligature may be removed.

"Pack small bits of gauze into the wounds to keep them open and draining, then dress over them with gauze saturated with any good antiseptic solution. Keep the dressing saturated and the wounds open for at least a week, no matter how favorable may be the symptoms."

Some people consider whiskey or brandy a cure for snake bite. There is plenty of evidence that many have been killed by such remedies, and little that they have ever saved any one, except perhaps when the victim was losing courage or becoming sleepy.

In any case send as fast as you can for a doctor. He should

come equipped with hypodermic syringe, tubes of anti-venomous serum, and strychnine tablets.

### Harmless Snakes

Far the greatest number of our snakes are harmless, beautiful, and beneficent. They are friendly to the farmer, because, although some destroy a few birds, chickens, ducklings, and game, the largest part of their food is mice and insects. The Blacksnake, the Milk Snake, and one or two others, will bite in self-defence, but they have no poison fangs, and the bite is much like the prick of a bramble.

### Books Recommended

THE REPTILE BOOK, Raymond L. Ditmars. Doubleday, Page & Co., 1907; 465 pages, many ills. Price, \$3.50.

POISONOUS SNAKES OF NORTH AMERICA, Leonhard Stejneger. Government Printing Office.

THE CROCODILIANS, LIZARDS, AND SNAKES OF NORTH AMERICA, Edward Drinker Cope. U. S. National Museum, June, 1898.

REPTILES OF THE WORLD (with readable histories of their habits) about 300 illustrations, Raymond L. Ditmars. The Sturgis & Walton Co. Price, \$5.00.

THE  
LIBRARY  
OF THE  
MUSEUM  
OF  
ART AND  
ARCHAEOLOGY  
OF THE  
UNIVERSITY OF  
CAMBRIDGE



**SECTION IV**  
**COUPS AND DEGREES**

1980

## CHAPTER IV

### COUPS AND DEGREES

#### WOODCRAFT EXPLOITS AND ACHIEVEMENTS

The Woodcraft League is organized on the idea that boys and girls who are interested in outdoor life and in active living will continue along these lines as they grow older. Many of the Coups are such as to be within the reach of Woodcraft Boys and Girls but the Degrees will in many cases be available only for the older members of the League. Woodcraft Exploits and Degrees are standard. They include work for both sexes, though each sex will find it desirable to select the ones most fitted to it. In many cases, however, both boys and girls may select the same Exploit or Degree. In fact, we believe that a sharing of many experiences would help greatly in solving some of the problems which we are facing at the present time.

Exploits are indicated by the wearing of the Coup or Grand Coup Badge each for a single exploit as listed.

Achievement is indicated by the wearing of the Degree Badge for general proficiency in any one of the various Degrees in Woodcraft.

#### Exploits

The Exploits are intended to distinguish those who are first class in any department, and those who are so good that they may be considered in the record-making class. The French word "coup"\* has been used by the Woodcraft Movement for 16 years. No one can count both Coup and Grand Coup, or get a second similar badge in the same department except for heroism, mountain climbing, and others that are specified as "repeaters," in which each badge is added to that previously worn.

No badges are conferred unless the exploit has been properly witnessed or proven, and approved by a careful committee. When it is a question of time under one minute, only stop watches are allowed. Badges, once fairly won, can never be lost for subsequent failure to reach the standard. Except when otherwise stated, the exploits are meant for all ages.

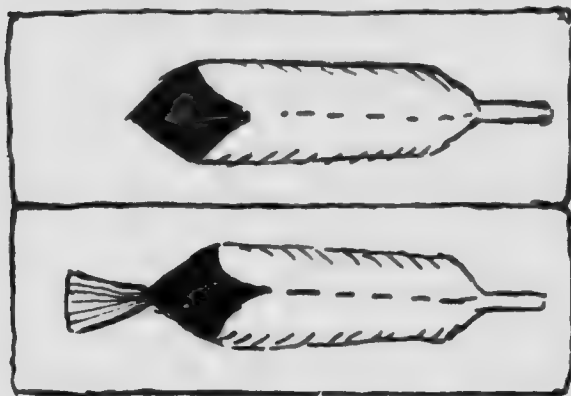
\* Pronounced "Coo."

Any one counting Coup, according to the class above him, may count it a Grand Coup in his own class, unless otherwise provided.

This list is made by the Council of Guidance. The exploits are founded on world-wide standards, and with the help of the best experts. The Council will gladly consider any suggestion, but it must be understood that no local group has any power to add to or vary the exploits in any way whatsoever.

### Badges for Coups

(For form of conferring coup badges see page 32)



Coup (above) and Grand Coup

The badge for the Coup is an embroidered eagle feather.

The badge for the Grand Coup has a red tuft embroidered on the end of the Coup badge.

In the case of the Sagamore who has won twenty-four coups he or she is entitled to wear the twenty-four conventional eagle feathers on a Council Robe. Also the Woodcraft Boy is entitled to wear a war bonnet of twenty-four eagle feathers on special occasions such as grand councils. A Sagamore must be at least fourteen years of age.

## CLASS I—EXPLOITS

### Athletic

#### Coups and Grand Coups

Badges are allowed for saving a human life at risk of one's own; it is a *coup* or a *grand coup*, at the discretion of the Council.

A soldier's war medals count for a *grand coup* each.

*Courage.* (The measure of courage has not yet been discovered.)

## Riding

To *ride* a horse one mile in three minutes, clearing a four-foot hurdle and an eight-foot water jump, counts *coup*; to do it in two minutes, clearing a five-foot hurdle and a twelve-foot water jump, *grand coup*.

*Trick riding.* To pick up one's hat from the ground while at full gallop on a horse of not less than thirteen hands, counts *coup*.

To do it three times without failure, from each side, with horse of at least fifteen hands, counts *grand coup*.

## General Athletics

Those under ten are children; those over ten and under sixteen are boys or young girls; those over sixteen and under eighteen are lads or girls; those over eighteen are men or women.

Girls take the standards according to their ages up to eighteen, but for athletics are never over that. No matter what their age, henceforth they continue in the "lad class," and in filing the claim need only mention their class.

Men or women over seventy return to the lad class.

The records are given according to Spalding's Almanac, where will be found the names of those who made them, with date and place.

A dash (—) means "not open."

No test requiring violent exercise should be taken unless the member has passed a general physical examination. The Guide of each group should see that this precaution is observed, and especially so in the case of the girl members.

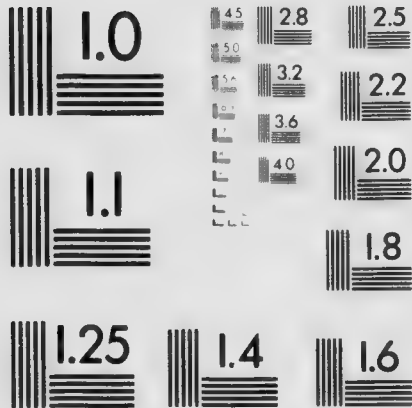
Failure to observe the condition of the body may result in life-long harm.

Don't try for any Coup in athletics without getting your Guide's approval.



# MICROCOPY RESOLUTION TEST CHART

(ANSI and ISO TEST CHART No. 2)



APPLIED IMAGE Inc

1653 East Main Street  
Rochester, New York 14609 SA  
(716) 482-0300 Phone  
(716) 288-5389 Fax

## GENERAL ATHLETICS (Continued)

	UNDER 10	UNDER 12	UNDER 14	UNDER 16	UNDER 18	OVER 18	RECORD
<i>Walking</i>							
50 yards	coup. g. c. 16 s; 15	coup. g. c. 14; 13	coup. g. c. 13; 12	—	—	coup. g. c.	36½ s
100 yards	31 s; 20	27; 25	22; 20	—	—	—	1 m 23 s
220 yards	70 s; 65	60; 56	50; 45	—	—	—	3 m 28 s
440 yards	4 m; 3½	3; 2½	2; 1-45	—	—	—	6 m 29½ s
880 yards	6½ m; 6	5½; 5	4½; 4½	—	—	—	7 m; 1318 yds
1 mile	14 m; 13	13; 12	12; 11	11; 10	10; 9½	8½; 7½	38 m; 58 s
in one hour	—	—	3½ m; 4 m	4; 4½	4½ mi; 5 mi; 5½ mi	40 mi; 45 mi	
12 hours	—	—	25 m; 30 m	80; 70	30 mi; 35 mi; 40 mi; 45 mi	60 m; 50 m	
5 miles	—	—	90 m; 80 m	—	70 m; 65 m	—	
<i>Running</i>							
50 yards	7½ s; 7	7; 6½	6½; 6½	—	—	—	58 s
100 yards	—	—	14½ s; 13½	13½; 13	12½; 11½	10½; 10½	98 s
220 yards	—	—	—	34 s; 32	29; 27	26; 24	21106
440 yards	—	—	—	80 s; 70	63; 58	56; 52	47 s
880 yards	—	—	—	3 m; 2½	2½ m; 2½	2½; 2½	1 m 53½ s
1 mile	—	—	—	—	—	5½ m; 4½	4 m 15½ s
5 miles	—	—	—	—	—	35 m; 30	25 m 23½ s
<i>Running backward</i>							
50 yards	14 s; 13	13; 12	12; 11	11; 10	10; 9	9; 8	7½ s
100 yards	23 s; 22	21; 20	20; 19	19; 18	18; 17	17; 16	14 s
<i>Standing high jump</i>							
without weights	2½ ft; 2½	3; 3½	3½; 3½	3½; 4	4; 4½	4½; 4½	5 ft 5½ in
<i>Running high jump</i>							
without weights	3 ft; 3½	3½; 3½	3½; 4	4; 4½	4½; 4½	5½; 5½	6 ft 5½ in



## GENERAL ATHLETICS (Continued)

	UNDER 10	UNDER 12	UNDER 14	UNDER 16	UNDER 18	OVER 18	RECORD
<i>Standing broad jump without weights</i>	5 ft; 5½	5½; 6½	6; 6½	6½; 7	7; 8	9; 10	11 ft 3½ in
<i>Running broad jump without weights</i>	12 ft; 13	13; 14	14; 15	15; 15½	15½; 16½	17½; 19	24 ft 7¼ in
<i>Hop, step, and jump without weights or run</i>	13½; 15	15; 16	16; 18	18; 20	20; 22	23; 26	30 ft 3 in
<i>Hopping on one leg</i>	—	—	13; 12	12; 11	11; 10	9; 8	7½ s
50 yards	—	—	—	—	20 s; 18	17; 16	13½ s
100 yards	—	—	—	—	—	—	—
<i>Hammer throw</i>	—	—	—	—	(12 lb hammer) 60 ft; 70	(16 lb hammer) 65; 75	100 ft. 5 in
3½-ft. handle from 7-ft. circle, both hands	—	—	—	—	—	(16 lb shot)	—
<i>Shot-put</i>	—	—	—	—	—	—	—
7-ft. circle (12 lb. shot)	—	20 ft; 21	21; 23	24; 26	28; 30	36; 40	47 ft
<i>Discus</i>	—	—	—	—	70 ft; 85	90; 100	128 ft. 10½ in
7-ft. circle (4½ lbs.)	—	—	—	—	—	—	—

## GENERAL ATHLETICS (Continued)

	UNDER 10	UNDER 12	UNDER 14	UNDER 16	UNDER 18	OVER 18	RECORD
<i>Throw baseball</i> (regulation)	50 yds; 55	60; 65	70	70; 75	75; 95	100; 110	127 yds 2½ in
<i>Batting baseball</i>	45 yds; 50	55; 60	65	65; 70	70; 90	95; 105	118 yds 10 in
<i>Throwing lacrosse</i> ball with stick	70 yds; 80	80; 90	90; 100	100; 110	110; 130	130; 150	165 yds 2 ft 7½ in
<i>Football kick a</i> drop goal	20 yds; 25	29; 30	30; 35	35; 40	40; 45	50; 55	63 yds 11 in
<i>Football</i>					may try	g. c.; Put two Rugby footballs in middle of Rugby field and kick a right and left goal	
<i>Football</i> Place kick counted to where ball first strikes ground	25 yds; 30	30; 35	40	40; 45	45; 50	55; 60	66 yds 2 ft 8 in
<i>Running high kick</i>	5½ ft; 6	6; 6½	6½	6½; 7	7; 7½	8; 8½	9 ft 8 in
<i>Climb rope</i> 18 ft; hands only used	15 s; 14	13; 11	10	10; 9	9; 7	6; 5	3½ secs
<i>Chin the bar</i>	3 times; 4	6; 8	8; 9	9; 10	10; 12	13; 15	39 times

## GENERAL ATHLETICS (Continued)

	UNDER 10	UNDER 12	UNDER 14	UNDER 16	UNDER 18	OVER 18	RECORD
<i>Climb bar</i> with right hand " left hand					the same the same	the same the same	12 times
<i>Hand walk</i> on hands, heels up	5 ft; 10	15; 20	20; 25	25; 30	30; 50	75; 100	
<i>Parallel bar</i> 3 successive arm jumps with swings	10 ft; 11	11; 12	12; 13	13; 14	14; 15	16; 18	19 ft 9 in
<i>Push up without swing</i>	10 times; 12	14; 16	16; 18	18; 20	20; 25	30; 40	58 times
<i>Dumb-bell</i> Put up 5-pounder with one hand to full arm's length above shoulders	50 times; 100	100-150	150; 200	(10- pounder) 40; 60	(10- pounder) 75-150	(10- pounder) 200-350	8,341 times
<i>Skating</i> 100 yards 440 yards 880 yards 1 mile 5 miles 10 miles	17 s; 16 — — — — —	16; 15 75 s; 70 160 s; 155 4 m; 34 — —	15; 14 70; 68 155; 150 34; 31 — —	14; 13 68; 65 150; 145 34; 31 25 m; 23 55 m; 50	13; 12 65; 60 145; 140 34; 31 23 m; 21 50 m; 48	11; 10 50; 45 135; 130 3; 2 19; 17 42; 36	9 s (with wind) 35½ secs 1 m 20½ s 286 mins 14 m 24 s 31 m 11½ s

## GENERAL ATHLETICS (Continued)

	UNDER 10	UNDER 12	UNDER 14	UNDER 16	UNDER 18	OVER 18	RECORD
<i>Skating—Cont</i>							
15 miles	—	—	—	90 m; 85	85 m; 80	70; 60	49 m 17½ s
20 miles	—	—	—	2½ hr; 2.10	2.10 hr; 2	1½; 1½	1 hr. 6 m 36½ s
25 miles	—	—	—	4 hr; 2½	1½ hr; 2½	2½; 2	1 hr. 31 m 29 s
<i>Rowing</i> (single sculls)							
1 mile	13 m; 12	12; 11	11; 10	10; 9	9; 8	7½; 6½	
<i>Paddle</i> (single) 1 mile	16 m; 15	15; 14	14; 13	13; 12	12; 11	10; 9	
<i>Swim</i>							
100 yards	any time	any time	any time	any time	any time	any time	58 s
200 yards	<i>coup</i>	<i>coup</i>	<i>coup</i>	<i>coup</i>	<i>coup</i>	<i>coup</i>	2 m 20 s
1 mile	6 m, g. c.	5 m, g. c.	4½	4	3¾ m, g. c.	3 m, g. c.	24 m 46½ s
<i>Medley Race</i> (400 yards)	—	—	—	—	50 m; 45	45; 35	
rowing 100	—	—	—	7; 6	6 m; 5	4½; 4	
swimming 100	—	—	—	—	—	—	
walking 100	—	—	—	—	—	—	
running 100	—	—	—	—	—	—	
<i>Bicycle</i> 1 mile	—	—	—	4; 3½	3½ m; 3	2½; 2½	

## Athletic Specialties

(Open to those only who are over 21)

Run	10 miles, <i>coup.</i>	80 m., <i>g. coup.</i>	70 m.,	Record	52 m.	38½ s.
"	15 "	2 "	1½ h.,	"	1 h.	27 "
"	20 "	3 "	2½ "	"	2 "	13 "
"	30 "	4½ "	4 "	"	3 "	36 "
"	40 "	6½ "	6 "	"	5 "	20½ "
"	50 "	9 "	8 "	"	7 "	29 "
"	75 "	16 "	14 "	"	12 "	20 "
"	100 "	24 "	21 "	"	17 "	36 "
Walk	10 miles, <i>coup.</i>	1½ hrs. <i>g. coup.</i>	1½ h.	"	1 h.	17 m.
"	15 "	3 "	2½ "	"	2 "	14 "
"	20 "	4 "	3½ "	"	3 "	8 "
"	25 "	5 "	4½ "	"	4 "	3 "
"	30 "	7½ "	6½ "	"	5 "	33 "
"	40 "	10 "	9 "	"	7 "	25 "
"	50 "	13 "	12 "	"	9 "	29 "
"	75 "	18 "	16½ "	"	15 "	0 "
"	100 "	30 "	25 "	"	21 "	0 "
Skatego	"	5 "	4 "	"	3 "	15 "
"	75 "	7½ "	6 "	"	5 "	19 "
"	100 "	12 "	10 "	"	7 "	11 "
Swim	5 "	4 "	3½ "	"	2 "	58 "
"	10 "	in any time.				
"	15 "	<i>grand coup</i> in any time				
Bicycle	100 miles in 24 hrs., <i>coup</i>					
"	200 " in 24 hrs., <i>grand coup</i>					
(Acc. to L. A. W. rules)						

**Weight-throwing.** Throw the 56-pound weight from a 7-foot circle: *coup*, 22 ft.; *grand coup*, 28 ft.; Rec. 38 ft. 7½ in.

**Dumb-bell.** Push up one 50-lb. dumb-bell with one hand to full arm length above the shoulder: 15 times for *coup*; 30 times, *grand coup*; Rec. 94 times.

Ditto with 100-lb. dumb-bell: 5 times, *coup*; 10 times, *grand coup*; Rec. 20 times.

Ditto with two 100-lb. dumb-bells once; one in each hand, same time, *grand coup*.

*To turn a wheel, coup.*

**Handspring.** Throw a tumbler or 4-legged handspring, *coup*; throw a clean handspring, *grand coup*.

**Back handspring.** A clean back handspring, *grand coup*.

## Water Sports and Travel

(For swimming, rowing, etc., see classified athletics on a previous page.)

**Bathing.** A *coup* for having bathed out of doors in water of natural temperature anywhere north of N. Lat. 30, or south

of S. Lat. 30, for 300 days in the year; a *grand coup* for 365 days.

*Paddle.* Row or pole five miles a day for five successive days, each day make a note and sketch (or photograph) of some interesting scene, *coup*.

Sail a boat without expert help for fifty miles in one season, *coup*.

Run a motor boat 100 miles on one occasion, that is, in one trip, *coup*.

*Log-riding.* Tread a sawlog 100 yards in any time, without going overboard, for *coup*; do it 100 yards and back in thirty minutes, for *grand coup*.

*Canoe-man.* Single paddle a canoe on dead water. Spill the canoe and get into her again, and bale her alone counts *coup*.

A *grand coup*, spill, right, and bale the canoe alone, three times in succession, and have run a rapid that falls six feet in 200 yards.

*Canoe-camper.* Have made a continuous canoe trip of 500 miles, sleeping out every night, *coup*; 1,000 miles of the same, *grand coup*.

*Saddle-camper.* Have made a continuous saddle trip of 500 miles, sleeping out every night, *coup*; 1,000 miles, *grand coup*.

*Lone-tramper.* Travel alone, 100 miles, carry outfit, sleep out every night, a *grand coup* for 200 miles.

*Gang-tramper.* Travel 150 miles on foot with a party, carry own outfit, sleep out every night, *coup*; a *grand coup* for 250 miles.

*Ski-man.* Travel six miles in an hour, forty miles in one day, cover forty feet in a jump, and travel 500 miles all told, *coup*; travel seven miles in an hour, fifty miles in one day, make a fifty-foot jump, and travel 1,000 miles all told, a *grand coup*.

*Arctic Traveler.* A *coup* for entering the Arctic Circle by sea; a *grand coup*, by land.

*Tropic Traveler.* Cross the Equator by sea or rail, *coup*; a *grand coup*, on foot.

*Motoring.* Have covered 1,000 miles within thirty days, acting as your own chauffeur and mechanic, *coup*; have covered 1,000 miles in four days, 100 miles in two hours, acting as your own chauffeur and mechanic, *grand coup*.

(In both cases garage privileges allowed.)

## Mountain Climbing (all Afoot)

(Not open to those under 14.)

By Sir Martin Conway, ex-president of the Alpine Club.

The exploits in this class are repeaters.

The first one to climb a standard peak gets two badges: one for *climb*, one for *first climb*.

For those over 14 and under 18.

## Coup

*In Great Britain*—Ben Macdhuie, Ben Nevis, Ben Lomond, Ben Cruachan, Snowdon, Scarfell.*In Europe*—Vesuvius, Breithorn.*In North America*—Mt. Washington, N. H.; Electric Peak, Wyo.

## Grand Coup

*In Europe*—Mt. Blanc, Monte Viso, Etna, Monte Rosa.*In North America*—Pike's Peak, Shasta, Adams.*In Asia*—Fujiyama; Tabor.

Add to this all the list of next group.

For all those over 18.

## Coup

*In Europe*—Mt. Blanc, Monte Rosa, Monte Viso, Ecrins, Grand Paradis, Jungfrau, Finsteraarhorn, Wetterhorn, Bernina, Ortler, Gross, Glockner, Matterhorn from Zermatt.*In North America*—St. Helen's, Adams, Shasta, Hood, Rainier, Mt. Shaughnessy, Mt. Stephen, Popocatepetl; Orizaba.

## Grand Coup

*In Europe*—Meije, Aig. du Grépon, Aig. du Géant, Aig. du Dru, Matterhorn (by Italian or Stockje ridges), Dent Blanche, Mischabelhörner from Seas, Schreckhorn, Monte di Scerscen, Fünffinger Sp., Kleine Zinne.*In North America*—Mt. Sir Donald, Mt. Logan, Mt. Assiniboine, Mt. Fairweather, Mt. St. Elias, Grand Teton, Mt. McKinley. Any peak in Alaska over 13,000 feet high.*In South America*—Chimborazo, Cotopaxi, Illimani, Aconcagua.

*In Asia*—Any peak 19,000 feet high.

*In Africa*—Any peak over 15,000 feet high.

### Target Shooting

(Open to men or women only.)

Everything that can be said in favor of firearms for use in general sport applies to the rifle only (and its understudy the revolver). The scatter-gun has no official existence for us. It is ruination to the marksman's power and should be abolished. A rifle range is a desirable adjunct to all grown-up camps. Badges awarded according to the army standards.

*Revolver-shot.* Target 4 x 4 feet. Bull's-eye eight inches (counts four points). Inner ring two feet (three points). Outer, the rest of target (two points). Distance, thirty yards.

Ninety-six shots divided in any number up to six days, one hand, standing: 250 points count *coup*; 300, *grand coup*.

Half with left hand only; half with right only: 230 points, *coup*; 260, *grand coup*.

*Rifleman.* To be a *marksman* of the highest rank but one, according to militia standards, a *coup*; to be an *expert rifleman* of the highest rank, a *grand coup*.

### Eyesight

Spot the Rabbit three times out of five at sixty yards, also distinguish and map out correctly six Pleiades and see clearly the "Pappoose (Alcor) on the Squaw's (Mizar) back" counts a *coup*; spot the Rabbit three times out of five at seventy yards and seven Pleiades and the Pappoose, counts a far-sight *grand coup*. (Those who habitually wear glasses may use them in this test.) (See "Far-sight," among the games.)

Make a seventy-five score in ten tries in the game of Quick-sight, with ten counters, counts *coup*; a ninety-five score counts a *grand coup*. (See "Quick-sight," among the games.)

## CLASS II—CAMPERCRAFT

*Bee-line.* Come to camp through strange woods from a point one mile off and return in thirty minutes, *coup*; in twenty, for *grand coup*.

*Match-fire.* Light fifteen campfires in succession with fifteen matches, all in different places, all with stuff found in the woods by one's self, one at least to be on a wet day, *coup*; if all fifteen are done on wet days, or if one does thirty, of which two are on wet days, *grand coup*.



**Flint and Steel Fire.** Light fifteen campfires in succession with wildwood timber, one at least on a wet day, and none take over a minute from striking the flint to having it blaze, *coup*; if all fifteen are done on one day, or if one does thirty fires in unbroken succession, two at least on wet days, and in no case more than half a minute from strike to blaze, *grand coup*.

**Rubbing-stick Fire.** Light a fire with a fire-drill or rubbing-sticks, with material of one's own gathering, *coup*; to do it in one minute, *grand coup*.

**Water Boiling.** Boil one quart of water in a two-quart pail in twelve minutes; in nine minutes, *grand coup*. Allowed one log, one match, one axe or hatchet. The water is boiling when jumping and bubbling all over the surface.

**Axeman.** Chop down three six-inch trees in succession in sixty seconds each, throwing them to drive each a given stake; in forty-five seconds each, *grand coup*.

**Knots.** Make twenty-five different standard knots mounted and tagged for exhibition for *coup*; fifty for *grand coup*.

Make an exhibition card of braiding and splicing ropes and fancy knots—twenty, *coup*; thirty, *grand coup*.

**Lasso.** Catch ten horses or cattle in corral with ten throws of the lasso, *coup*; catch ten on the range in ten throws, *grand coup*.

**Lasso.** Catch a horse or beef by each of his four feet in four successive throws, *grand coup*.

**Lasso.** To catch, throw, and "hog-tie" a beef or horse in two and one half minutes, *coup*; in one and one half minutes, *grand coup*. The record is said to be forty seconds.

**Diamond Hitch.** Pack a horse with not less than 100 lbs of stuff with diamond hitch, to hold during eight hours of *coup*; ten days in succession, *grand coup*.

**Size Guessing.** Guess one inch, one foot, one yard, one acre, 100 yards, 200 yards, one quarter mile, one half and a mile, within 20 per cent. of average error, for *coup*, 10 per cent. for *grand coup*.

**Height and Weight Guessing.** Guess the height of ten trees or other high things, and the weight of ten stones or other things ranging from one ounce to 100 pounds, within 10 per cent. of average error, for *coup*; 5 per cent. for *grand coup*.

**Gauging Farness.** Measure the height of ten trees without climbing, or ten distances across a river without crossing, within 10 per cent. of average error, *coup*; 5 per cent., *grand coup*, tools: an axe and a pocket rule only.

**Star Gazing.** Know and name fifteen star groups, for *coup*;

know twenty star groups and tell the names and something about at least one star in each, for *grand coup*.

*Latitude.* Take the latitude from the stars at night with a cart wheel, or some home-made instrument, ten times from different points, within one degree of average error, for *coup*; one half degree for *grand coup*.

*Traveler.* Take correct latitude, longitude, and local time, *coup*. Having passed the Royal Geographical Society's examination of "expert traveler," *grand coup*.

*Boat-builder.* Build a boat that will carry two men and that can be paddled, rowed, or sailed by them five miles an hour, *coup*; six miles an hour, *grand coup*.

*Birch Canoe.* Make a birch canoe that has traveled with at least one man aboard, 100 miles or more in safety, *grand coup*.

*Sign Talking.* Know and use correctly 200 signs, *coup*; 400 signs, *grand coup*.

*Wigwag or Myer Signaling.* Know this code and signal, as well as receive a message a quarter mile off, at the rate of ten words a minute, *coup*; the same, at a mile, twenty-four words a minute, *grand coup*.

*Morse Code.* The same.

*Trailing.* Know and clearly discriminate the tracks of twenty-five of our common wild quadrupeds, also trail one for a mile and secure it without aid of snow, *coup*; similarly discriminate fifty tracks, and follow three tracks a mile as before, but for three different animals, *grand coup*.

*Camper.* Pass thirty successive nights out of doors, never once sleeping under shingles, but in tent, teepee, or bivouac, every night, *coup*; sixty nights of the same, *grand coup*.

*Cooking.* Cook twelve digestible meals for at least three persons, using ordinary camp outfit, *coup*; or twenty-one meals and in addition make good bread each day, *grand coup*.

*Wilderness Cooking.* Make and bake bread, fry fish or meat, and boil potatoes or fish without pots or pans. *Coup* or *grand coup*, according to merit.

*Cabin.* Build a habitable log cabin not less than 6 x 8, with wind-tight walls and waterproof roof. *Coup* or *grand coup*, according to merit.

*Tent or Teepee.* Make a two-man tent or an 8-foot teepee or better, single handed, and set them up; *coup* or *grand coup*, according to merit.

*Latrine.* Make and run for three days a perfect latrine in army fashion, *coup* or *grand coup*, according to merit.

*City-hunter.* Find and sketch twenty-five blazes and totems

in town and tell where you found them. Indicate the distinguishing marks of policemen, park policemen, traffic squad, strong-arm squad, etc. *Coup or grand coup*, according to merit.

**Blazes and Signs.** Make the four usual Indian Signs or Blazes on tree trunk, in twigs, grass, stones, give the smoke signals, and add twenty-five other signs or pictographs used by the Indians. *Coup or grand coup*, according to merit.

**Herald.** Open and lead the Council, light the sacred fire, performing the Peace Pipe ceremony and the Naming ceremony. Know three Indian dances, and the Omaha Invocation. *Coup or grand coup*, according to merit.

**Peace Messenger.** Know 100 signs of the Sign Language and translate into English from any other language sentences amounting to 300 words, *coup*; know 200 signs and translate from two languages, *grand coup*.

Have planned, made, and established a Council Ring, *coup or grand coup* according to merit.

**Map.** Make a correct map of a region one mile long, one quarter mile wide, such as a mile of highway, taking in one eighth of a mile on each side, marking every house, fence, hill, and prominent tree, etc. When there is a stream, indicate the size, speed, gallons it runs per hour, and bridges. *Coup or grand coup*, according to merit.

**Sweat Lodge.** Make and use properly a Sweat Lodge three times in a week, in two of the times it may be given to another person for *coup*.

Run a Sweat Lodge successfully for one month, treating at least a dozen patients, *grand coup*.

**Bow and Arrows.** Make a bow and six arrows that will carry 100 yards, *coup*; 150 yards, *grand coup*.

**Tomtom.** Make and decorate a tomtom; *coup or grand coup*, according to merit.

### Archery

(Revised by Will H. Thompson, of Seattle, Wash.)

Make a total score of 300 with sixty shots (in one or two meets) four-foot target at forty yards (or three-foot target at thirty yards), for *coup*; make 400 for *grand coup*.

Shoot so fast and far as to have six arrows in the air at once, for *coup*; seven for *grand coup*. (According to Catlin, the record is eight.)

For children (under ten), to send an arrow ninety yards, *coup*; 115 yards, *grand coup*. For those ten to fourteen, to send an arrow 125 yards, *coup*; 150, *grand coup*. For those fourteen to

eighteen, to send an arrow 175 yards, *coup*; 200, *grand coup*.  
For those over eighteen, to send an arrow 250 yards, *coup*;  
275, *grand coup*.

To hit the Burlap Deer in the heart, first shot:

10-14 at 45 yards, *coup*; 55 yards, *grand coup*

14-18 " 60 " " 70 " " "

Over 18 " 75 " " 85 " " "

(The heart is nine inches across.)

To cover a mile:

Children in 19 shots for *coup*; 15 shots for *grand coup*

10-14 " 14 " " " 11 " " " "

14-18 " 10 " " " 9 " " " "

Over 18 " 8 " " " 7 " " " "

### Long Range, Clout, or Flight Shooting

14-18 Three-foot target at 130 yards, if possible on a steep hillside.

In the target is a bull's eye, and counts . . . 9

Within 3 feet of outside of target " . . . 7

" 6 " " " " " " . . . 5

" 9 " " " " " " " . . . 3

" 12 " " " " " " " . . . 1

*Coup* is for 300 at sixty consecutive shots. *Grand coup* is for 400 at sixty consecutive shots.

(In one or two meets.)

Over 18 Four-foot target at 180 yards, if possible on a steep hillside.

In the target is a bull's eye, and counts . . . 9

Within 6 feet of outside of target " . . . 7

" 12 " " " " " " " . . . 5

" 18 " " " " " " " . . . 3

" 24 " " " " " " " . . . 1

*Coup* for 300 at sixty consecutive shots. *Grand coup* for 400 at sixty consecutive shots.

(In one or two meets.)

### Fishing

(By Dr. Henry van Dyke, Author of "Little Rivers," "Fisherman's Luck," etc.)

(Boys are those under 14; lads 14 to 18; men 18 and over.)

(Young girls are those under 14; girls, 14 to 18; women 18 and over.)

*Tackle-making.* Boys and young girls: To make a six-foot leader of clean gut, with smooth knots to stand a strain of

five pounds, *coup*. To tie six different flies, of regular patterns, on number eight-twelve hooks, and take trout with each of them, by daylight casting in clear water, *grand coup*.

Lads and Girls: Make a bait rod of three points, straight and sound, fourteen ounces or less in weight, ten feet or less in length, to stand a strain of one and one half pounds, at the tip, thirteen pounds at the grip, *coup*. Make a jointed fly-rod eight-ten feet long, four-six ounces in weight, capable of casting a fly sixty feet, *grand coup*.

*Fly-fishing*. Boys and lads and young girls and girls: Take with the fly, unassisted, a three-pound trout or black bass, on a rod not more than five ounces in weight, *coup*. Take a five-pound trout or black bass or a four-pound landlocked salmon under the same conditions, *grand coup*.

Men and women: Hook and land with the fly, unassisted, without net or gaff, a trout or landlocked salmon over four pounds, or a salmon over twelve pounds, *coup*. To take, under the same conditions, a salmon over twenty-five pounds, *grand coup*.

*General Fishing*. Boys, lads, men, young girls, girls, and women. Take on a rod, without assistance in hooking, playing, or landing, a trout, black bass, pike, muscallonge, grayling, salmon, bluefish, weakfish, striped bass, kingfish, sheepshead, or other game fish, whose weight in pounds equals or exceeds that of the rod in ounces.

Take under the same conditions a game fish that is double in pounds the ounces of the rod, *grand coup*.

*Indoor Fly-casting*. Boys and young girls: To cast a fly with a rod of five ounces or less, not over ten feet long, forty feet, *coup*; fifty-five feet, *grand coup*.

Lads and girls: Sixty-five feet, *coup*; eighty feet, *grand coup*.

Men and women: Eighty feet, *coup*; ninety-five feet, *grand coup*.

"Every fish caught and kept, but not used, is a rotten spot in the angler's record" (H. v. D.).

### Bait Casting

(Revised by Lou S. Darling, of New York. Author of "Tournament Casting and the Proper Equipment.")

With one-fourth ounce dummy frog, five-foot rod, indoors, overhead casting, tournament style:

Child	class	40 feet for <i>coup</i> ;	50 feet for <i>grand coup</i> .
Boys and			
young girls "	60	" " "	70 " " " "

Lads and girls class, 80 feet for *coup*; 90 feet for *grand coup*.

Men and

Women " 100 " " " 120 " " " "

If out of doors add 10 per cent. to each of the distances if cast is made with the wind.

If a wooden plug is used instead of the dummy frog add 30 per cent. to each distance.

### CLASS III—NATURE STUDY

#### Vertebrates

(Revised by Frank M. Chapman, of the American Museum of Natural History, New York City.)

Know and name correctly twenty-five native wild quadrupeds, for *coup*; know and name correctly fifty, and tell something about each, for *grand coup*.

Know and draw unmistakable pictures of twenty-five tracks of our four-foot animals, for *coup*; of fifty, for *grand coup*.

Know and name correctly 100 of our native birds as seen mounted in a museum, the female and young to count separately when they are wholly different from the male. Two hundred birds, *grand coup*.

Know and name correctly fifty wild birds in the field; 100, *grand coup*.

Recognize fifty wild birds by note; 100 for *grand coup*.

Know and name ten turtles; twenty for *grand coup*, with something interesting about each.

Know and name ten different snakes, tell which are poisonous, for *coup*; twenty snakes for *grand coup*.

Know and name correctly ten Batrachians; twenty for *grand coup*.

Know and name twenty-five fish; fifty fish for *grand coup*.

#### Lower Forms of Life

(Revised by John Burroughs.)

Know and name twenty-five native land and fresh-water shells fifty for *grand coup*.

Know and name twenty-five moths, fifty for *grand coup*.

Know and name twenty-five butterflies, fifty for *grand coup*.

Know and name fifty other insects, 100 for *grand coup*.

Know and name correctly, i. e., with the accepted English names, according to any standard authority, twenty-five trees, and tell something interesting about them, fifty for *grand coup*.

Know and name correctly fifty of our wild flowers, 100 for *grand coup*.

Know and name correctly twenty-five of our wild ferns, fifty for *grand coup*.

Know and name correctly twenty-five of our native mosses, fifty for *grand coup*.

Know and name fifty common toadstools or mushrooms, 100 for *grand coup*.

Make and maintain a vivarium (aquarium with part land for turtles, frogs, etc.) successfully for six months and keep record of life of inmates. Dimensions two by four. *Grand coup* for one year success or unusual beauty or size.

Keep ten records of different birds when first seen, nesting broods hatched, flying, etc., in one year. *Grand coup* -- fifteen records.

Dry and mount twenty-five ferns, properly identified. Fifty for *grand coup*.

### Geology, etc.

(Revised by Prof. Charles D. Walcott, Secretary, Smithsonian Institution.)

*Paleontology*. Know and name, referring to their proper strata, fifty native fossils, 100 for *grand coup*.

*Mineralogy*. Know and name fifty minerals, for *coup*; or 100 for *grand coup*.

*Geology*. Know and name and describe the fourteen great divisions of the earth's crust, according to Geikie, also define watershed, delta, drift, fault, glacier, terrace, stratum, dip, and identify ten different kinds of rock, for *coup*. In addition to the first, define sediment metamorphic, anticlinal, synclinal, moraine, coal, metal, mineral, petroleum, and identify in all twenty kinds of rock, for *grand coup*.

### Photography

(Revised by A. Radclyffe Dugmore, of *Country Life in America*, New York.)

(Photographs accepted and used at Headquarters count each a Coup or Grand Coup, according to merits.)

Make a good recognizable photograph of any wild bird larger than a Robin while on its nest. With image three inches long *grand coup*.

Make a good photograph of a Ruffed Grouse drumming, a Prairie Chicken dancing, a Woodcock or a Wild Turkey strutting, *grand coup*.

Make a good recognizable photograph of a wild animal in the air, or *grand coup*, according to merit.

Ditto for a fish.

Get a good photograph of any large wild animal in its native surroundings, and *not looking at you*, for *coup* or *grand coup*, according to merit.

(As these are tests of woodcraft, menagerie animals do not count.)

Photograph and negative of Council or Woodcraft activities that can be used (need not be developed by self) as lantern slide and accepted by National Headquarters. *Coup* or *grand coup*, according to merit.

Photo and negative of descriptive dances as above (folk or Indian dances)—accepted and used by Headquarters, *coup* or *grand coup*.

Photo and negative of insects and butterflies, moths, etc., in natural surroundings—as above—*coup* or *grand coup*, according to merit.

Blueprints direct from flowers (in collection named and identified as to locality and season) *coup* for twenty-five; *grand coup* for fifty.

## CLASS IV—CRAFTS

### Handicraft

*Coup or grand coup, according to merit*

Make a carved wood picture frame at least 8 x 10 inches ready for picture with glass and back—Indian carving suggested.

Make model teepee, model log cabin, or good miniature model of Council Ring with removable furnishings.

Make a model of camp—tents, teepees, fireplace.

Make a four-poster for willow bed.

Make and use a Navajo loom—for blanket weaving.

Make a decorated noggin.

Paint and decorate boards for Four Fires. *Coup* or *grand coup* according to merit.

Make, decorate, and fire four bowls (Zuni, Acoma, San Domingo, and Moquin style).

Make a set of four candlesticks and fire bowl for Good-luck Fire.



Make a set of tracking irons.

Make a bracelet of hammered silver or piece of brass or copper work or silverwork.

Make a set of three metal hubs, dies, or punches for stamping on metalwork.

*Indian Bed.* Make an Indian bed of at least sixty rods, all tied tight for *coup*. Make one of eighty or more rods with four cords all straight, and bound at the edges, for *grand coup*.

*Basket.* Make a serviceable basket of wildwood materials, not less than five inches across.

*Weaving.* Weave a good grass or rush rug, square and even, not less than 2 x 5 feet.

*Indian Clock.* Make an Indian clock, that is, a sun-dial, that works.

Make a pair of tilting stools and spears according to rules i.e., stools circular on top, fifteen inches across, about twenty inches high on four widespread legs.

Make a set of six plain cooking dishes of clay, dry and prepare by self.

### Agriculture

Take honorable mention or second or third prize for exhibit of vegetables or fruits or cereal grains grown, at County, State, or National Fair. *Grand coup* for first prize.

Take honorable mention or second or third prize for domestic animals exhibited at County, State, or National Fair. (Cats or dogs not included.) *Grand coup* for first prize.

Take prize at any County, State, or National Fair for chickens, geese, ducks, guineas, bees, silk-worms, or animals. *Grand coup* for first prize.

Milk a cow twice a day for month. Know how to treat a caked bag. Identify six different kinds of cattle and tell their good and bad points.

Have four window boxes of growing plants planted and cared for by self for four months of year. Boxes must be at least 24 x 8 inches.

Have successful perennial vegetable garden for two years. Garden must contain eight of the following: asparagus, Swiss chard, sorrel (rumex), parsley, leeks, onions, spinach, sage, thyme, mint, horseradish, cornsalad, hardy chives, and rhubarb. *Grand coup* for twelve.

Have grown for one year a cold-frame of pansies or violets.

*Grand coup* for having also started a friend with plants and helped make and fix cold-frame.

Clear \$25 on a half-acre garden, after paying for labor, etc., in one summer.

Make a successful mushroom cellar.

### Home Craft

*Coup or grand coup, according to merit*

Train a class in cooking—showing the members and making them do it correctly—for six persons and give demonstration of success.

Spin enough cotton, flax, wool, or hemp to make five yards of stuff or six pairs of socks.

Weave ten yards of cloth or rag-carpet rug or bedspread.

Prepare, cook, and serve daintily, four ten-course dinners for a party of not less than four people. Everything must be home cooked.

Serve practical and attractive meals to a family of six for one month at the rate of ten cents per meal per person, a total of \$54.

Prepare twelve meals on a tray for sick persons, using chicken broth, eggnog, milk toast, and show the value of bright and cheerful serving.

Know and be able to buy and cook all of the best cuts of lamb, mutton, beef, and pork, making sure meat is fresh and cooked correctly.

Know value of cereals and proper preparation of corn, wheat, rice, barley, and rye for bread and porridges. Also know about the care and feeding of infants from birth to three years.

Have been a "little mother," being a real daily guardian for three months—dressing, undressing, and caring for on time.

Act as hostess at a formal luncheon, dinner, or party of some band to at least six people for which the invitations were self-made and menu supervised. Also plan and carry out three outdoor picnics or entertainments for a dozen or more girls, at which refreshments are served.

Keep an eight-room house—used by not less than four people—clean and in order, caring for clothes, etc., arranging flowers, and assisting at meals for one month.

Do a family washing and ironing for not less than four persons for one month and do all cleaning and pressing of suits, skirts, trousers, etc.

## Drying, Preserving, and Canning Coups

Dry three pounds (weight when dried) of apples, peaches, or other fruit, *coup*. *Grand coup*, five pounds.

Glaze three pounds of any kind of fruit (candied fruit) *coup*. *Grand coup*, five pounds (cherries, cranberries, pineapple, orange, etc.).

Make three dozen glasses of jelly (without addition of any artificial jelly maker). *Grand coup*, five dozen glasses.

Preserve or can three dozen quarts of any fruit, *coup*. Five dozen quarts, *grand coup*.

Make one pound gumbo file' (sassafras buds and tender leaves dried and powdered). *coup*. *Grand coup*, two pounds.

Can two dozen quarts any vegetable except tomatoes, *coup*. *Grand coup*, three dozen.

Make two quarts (four ways) of tomato preserve and pickle. Canned ripe and unripe, *coup*. Six ways for *grand coup*.

Preserve uncooked in cold water alone six quarts each of rhubarb and green gooseberries, *coup*.

Take honorable mention or second or third prize for exhibit of Canned Goods or Preserves at County, State, or National Fair. *Grand coup* for first prize.

Take honorable mention or second or third prize for exhibit of cooked foods at County, State, or National Fair. *Grand coup* for first prize.

Take honorable mention or second or third prize for exhibit of preserves at County, State, or National Fair. *Grand coup* for first prize.

Candy one pound each of grape-fruit, orange, and lemon-peel, *coup*.

Candy one half pound each of mint leaves, rose leaves, violets, and calamus root, *coup*.

Make one pint elder-flower water, cucumber juice toilet water, or witch-hazel extract. Materials must be gathered by self, *coup*.

Make one pint mullein, camomile, ginger, and boneset tea. Materials gathered by self, *coup*.

Make salve from brunella (self-heal), witch hazel, or marigold (calendula); materials gathered by self, *coup*.

## Curing Meat and Fish

Catch and prepare for cooking 100 pounds, dressed weight, salt water fish. Fish must be used and not wasted.

Catch, salt, and dry twenty-five cod, hake, or haddock, or five kits of mackerel (about 200 mackerel); fifty for *grand coup*.

Prepare and cure jerked, salted, smoked, or spiced, fifteen pounds of any meat or fish. *Grand coup*, twenty-five pounds.

### Needle Craft

*Unless otherwise stated coup or grand coup, according to merit*

Make an evening, graduation, or party dress. Must be a complete success costing not less than \$10 for materials.

Make a symbolic bead belt.

Bead a pair of moccasins in symbolic design, *coup*. If moccasins also are made by self, *grand coup*.

Make leather case decorated in beadwork to hold fire-stick outfit with extra leather bag to hold tinder with symbolic design.

Make a sleeping bag for winter sleeping outdoors.

Make a complete Council suit for Little Lodge member. If of khaki should be trimmed in wash material or beads.

Knit a sweater suit for child; knit wristbands and collar in two colors.

Make a war shirt of good, authentic design and superior workmanship.

Make a pair of Indian leggings of good authentic design and superior work.

Make a leather dress of good design or a ceremonial robe.

Decorate a blanket—appliqué designs similar to Sagamore.

Make a baby's outfit complete, including bedding, etc.

Show samples of the sixteen following stitches:

*Coup*: Basting, overhanding, hemming, running, felling, stitch and backstitching, gathering, overcasting, buttonholing, sewing on buttons, herringbone, feather, darning stocking, darning a tear, patching.

*Grand coup*: The above stitches and double feather, tucking, French knots, hemstitching, cross-stitch, chain-stitch, button-hole stitch on edge of blanket, and decorative fan of stitches.

### CLASS V—ENTERTAINER

*Coup or grand coup, according to merit*

Recite the "Star-Spangled Banner." The first ten paragraphs of the Declaration of Independence, the preamble to the Constitution, and Lincoln's Gettysburg Address.

Teach a class of children successfully for six months in school, church, or recreation centre.

Entertain younger people on five different occasions—introducing song, story, dance, and manual training.

Dance six good folk dances that are solo dances.

Give a superlative performance of any of the standard dances on three public occasions.

Give history of woman's movement in this country, telling what states have woman suffrage.

Name the ten Americans whom you consider greatest in our history and say why. Do not include living people. Tell briefly of their lives and work.

*Dancer.* Know three Indian dancing songs and be able to dance and teach three standard Indian dances.

## CLASS VI—LIFE CRAFT

*Red Cross.* A *grand coup* for having passed the Red Cross examination of first aid to the injured.

*Life Saving.* For passing the U. S. Vol. Life Saving Corps diploma test for life saving in the water, a *coup*. For the same and an actual rescue, *grand coup*.

*Throwing Life Buoy.* For those under eighteen: To throw it forty feet; within ten feet of the mark is *coup*; the same but forty-five feet within five feet of the mark is *grand coup*. In each case it must be thrown three out of five.

For those over eighteen: To throw it fifty-five feet within ten feet of the mark is *coup*; sixty feet within five feet of the mark is *grand coup*. In each case three times out of five.

## DEGREES IN WOODCRAFT

The Degrees in Woodcraft are given because of general all-around proficiency. They cover all phases of life and enable Woodcrafters to work along lines which arouse the most interest and give the greatest pleasure. Some subjects are of interest to only one sex, but all are open to both sexes.

This list is made by the Council of Guidance. The degrees are founded on world-wide standards, and with the help of the best experts. The Council will gladly consider any suggestion, but it must be understood that no local group has any power to add to or vary the degrees in any way whatsoever.

## Degrees as Given in the Woodcraft League

Art Craftsman	Housekeeper
Art Metal Worker	Hunter
Athlete	Hunter in Town
Backwoods Handicraft	Indian Craftsman
Bird Sharp	Indian Lore
Brother-Sister Craft	Laundry Expert
Business	Life Craft
Camper	Lightning Wheeler
Camp Cook	Market Woman or Buyer
Camp Craftsman	Metal Worker
Camp Doctor	Mountaineer
Canner	Needle Woman
Canoeman	Nurse
Carpenter	Patriotism
Citizen	Potter
Colonial Housekeeper	Scout
Conservator	Scout-Runner
Cradle Craft	Seamanship
Dancer	Sharpshooter
Entertainer	Small Stock Farmer
Farmer	Star Wiseman
Fisherman	Stock Farmer
Foodcraft	Swimmer
Forester	Teacher
Frontiersman	Three Years' Service
Gardener	Thunder Handler
Gleeman	Thunder Roller
Handihelp	Traveler
Herald	Village Scout
Home Cook	White Man's Woodcraft
Horseman	Wise Woodman
Hostess	Woman's Power in History

## Degree Badges

Degree  
Badge

The Degree Badge is an embroidered square with a horn on each side.

The Blanket Degree badge is the Zuni Coil.

Zuni  
Coil

# Coups and Degrees

371



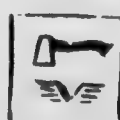
Art  
Craftsman



Art Metal  
Worker



Athlete



Backwoods  
Handicraft



Bird Sharp



Brother-Sister  
Craft



Business



Camper



Camp Cook



Camp Craftsman



Camp Doctor



Canner



Canoeman



Carpenter



Citizen



Colonial  
Housekeeper



Conservator



Cradle Craft



Dancer



Entertainer



Farmer



Fisherman



Foodcraft



Forester



Frontiersman



Gardener



Gleeman



Handihelp



Herald



Home Cook



Horseman



Hostess



Housekeeper



Hunter



Hunter in Town



Indian Lore



Indian Craftsman



Laundry Expert



Life Craft



Lightning Wheeler

Market Woman  
or Buyer

Metal Worker



Mountaineer

Needle  
Woman

Nurse



Patriotism



Potter



Runner



## Coups and Degrees

373



Scout



Seamanship



Sharpshooter



Small  
Stock Farmer



Star Wiseman



Stock Farmer



Teacher



Three Years'  
Service



Thunder  
Handler



Thunder  
Roller



Traveler



Village Scout



White Woodcraft



Wise Woodman



Woman's  
Power in  
History

## Claiming Degrees

A Degree may be claimed at Council after application has been made on a properly filled form which sets forth the claim with sufficient witnesses to prove legally that the test was fairly taken. (See page 32.)

The Degree Claim is certified by the Chief and Party Keeper of the Council conferring it, and returned to the applicant, but record is kept in the Tribal Tally.

None but Chartered Tribes in good standing have power to award either Coup or Degree Badges.

## Art Craftsman

*(Moninieio)*

The Degree of Art Craftsman may be conferred on any one who takes fifteen of these tests:

1. Make a ceremonial suit for one's self.
2. Make a ceremonial belt of beadwork telling a story.
3. Make a ceremonial suit for younger Woodcraft Boy or Girl.
4. Dress a doll (not less than ten inches high) accurately in Woodcraft ceremonial suit, or some other distinct outfit.
5. Make a gardening or artist's smock with smocking.
6. Embroider a ceremonial dress, symbolic or Indian design.
7. Make a head band or shoulder strap or equivalent work in quill work.
8. Make five yards of handmade lace.
9. Make and decorate a pair of Indian leggings or moccasins.
10. Make a leather cushion cover with beadwork, or appliqué, one of linen or a woven cover.
11. Weave a rug, Indian design preferred.
12. Make a box for coup feathers of leather or of birch bark.
13. Make an attractive box or bag for rubbing-sticks and tinder.
14. Decorate a blanket, similiar to Sagamore's.
15. Make three useful articles with burnt work decorations.
16. Carve three useful articles such as spoons, forks, bowls, fire socket, and ornament with Indian designs.
17. Make a frame for picture out of a single piece of wood eight inches by ten inches.
18. Make a tray in basketry complete with glass mounting.
19. Make three pieces of silver work of good design.
20. Make three pieces of brass work of good design.
21. Make and decorate a brass or copper bowl, vase, or plaque.
22. Make two hanging basket vases of willow or raffia suitable for porch decoration, fitted with holder of glass or tin.
23. Make a frame complete with glass and back, for Woodcraft charter.
24. Tell the meaning and name of ten beadwork designs used by American Indians such as rain, star, etc.

## ATHLETE, OR STRONGMAN

(Song-adis)

The Degree of Athlete is conferred on those who can make 15 out of those for the Big Lodge.  
 ---means "not open."

EVENT	UNDER 10	UNDER 12	UNDER 14	UNDER 16	UNDER 18	OVER 18
Walk 1 mile in	14 min.	13	12	11	10	9
Run 100 yards	—	—	—	13	12½	11½
" 50 "	7½ sec.	7½	7	—	—	—
Skate 100 "	17 "	16	15	14	13	11½
Swim "	any time	any time	any time	any time	any time	any time
Paddle 1 mile	15 min.	14	13	12	11	10
Row 1	14	13	12	10	9	8
Running broad jump	10 feet	11	12	13	14	15
" high	3 ft. 8	3.11	4.1	4.4	4.7	4.10
Standing broad jump	6 feet	6½	7	7½	8	8½
" high	3 "	3.2	3.4	3.6	3.8	3.10
Chin the bar	3 times	5	7	9	11	13
Push up from floor (no swing)	—	9 times	11	13	15	17
Rope climb (hands only)	—	16 sec.	14	12	10	8
Shot put 8 lbs.	—	—	—	30 ft.	35	40
Potato race 8 p's, 2 yds. apart, 5 yd. finish	47 sec	45	43	41	39	37
Throwing regulation baseball	50 yds	60	70	80	90	100
Batting baseball	45 "	50	55	70	80	95
Throwing lacrosse ball	70 "	80	90	100	115	130 ft.
Kicking football (place kick)	20 "	25	30	35	40	50
Put up 5 lb. dumb-bell	—	—	—	70	90	110 times

**Art Metal Worker***(Dasswabek)*

The Degree of Art Metal Worker may be conferred on any one who takes fifteen of these tests:

1. Make set of six buttons and a pair of cufflinks to match in copper, brass, German silver, or precious metal.
2. Make chain with pendants of same metals as above. May be filigree, link, or braided.
3. Make a brass tray, picture frame, etc.
4. Make bracelet, band, link, or chain.
5. Make set of three metal dies or hubs or punches for stamping in the designs in metal (such punches or hubs or dies as the Pueblo Indians use).
6. Make belt of metal—may be engraved plates or links or filigree.
7. Make a ring with design intaglio, or semi-precious stone in setting, or enamel.
8. Make set of nut bowl and plates.
9. Make bowl ten inches in diameter.
10. Make tray at least ten inches in diameter.
11. Make large knocker—Indian design or Colonial.
12. Make four small knockers for study, bedroom, playroom, and music room, with appropriate design.
13. Make set of andirons.
14. Make set of fire shovel, tongs, poker, and hearthbrush and stand.
15. Make desk set.
16. Make electric lamp stand for table, Indian design.
17. Make metal vase, suitable for lampstand or for flowers.
18. Make candlestick and matchholder or snuffers and extinguishers.
19. Make candlesticks and firebowl for the Four Fires.

**Backwoods Handicraftsman***(Shaginapi)*

The Degree of Backwoods Handicraftsman may be conferred on any one who takes seven of these tests:

1. Make a birch or hickory broom.
2. Make a hunter's lamp.
3. Make an Indian or willow bed.
4. Make a four-poster to carry the willow bed.
5. Make a wooden kneading trough.

6. Make a noggin or wooden drinking cup of a tree burl.
7. Make a basket to hold at least a quart using raffia, spruce roots, raitan, or other strong material.
8. Make a box or vessel of birch bark tight enough to hold any ordinary grain.
9. Build a cabin.
10. Make a mouse-proof cup-board.
11. Build a boat.
12. Make a Navajo loom.
13. Build a stone or brick bake oven.
14. Tanapelt with the fur on.
15. Remove the hair from a
- calfskin without using a knife or injuring the skin.
16. Repair a boot with a patch.
17. Make a pair of moccasins.
18. Build an oven out of doors.
19. Weave a rug or mat.

### Bird Sharp

(Bineshi)



The Degree of Bird Sharp may be conferred on any one who takes eight of these tests:

1. Identify fifty native birds in a collection. (When the sexes differ greatly, they count each as a bird.)
2. Identify twenty-five native birds in the field.
3. Identify twenty-five native birds by note.
4. Make a local list of twenty-five birds with remarks on arrival, departure, abundance, etc.
5. Mention twenty birds of great value to agriculture and say why.
6. Name ten birds that work in the orchard destroying the bark lice and other such pests.
7. Keep a journal with daily notes on the nesting of a pair of birds from setting to fledging.
8. Make and set up two successful bird boxes.
9. Make and set up a successful lunch counter.
10. Make and set up a successful bird bath.
11. Tell what bird sanctuaries are, and why they are being established.
12. Write an original essay of 500 words giving the life history of some native bird that you know well, telling when it arrives in the spring, how the male differs from the female, what its song is like, what are its haunts, where it nests, what its nests and eggs are like, when the young are raised and fly, what they are like at first plumage, how many broods are raised each season, what are its foods, its enemies, and its peculiarities.

### Brother or Sister Craft

(Awema)



The Degree of Brother or Sister Craft may be conferred on any one who takes seven of these tests:

1. Regularly take younger members of the family for walks or hikes into fields or woods.
2. Take charge of younger members of the family for two weeks (not necessarily consecutive) in the year, supervising sleep, food, and recreation successfully.
3. Plan and give successfully three parties for the younger children (this includes supervising games and behavior).
4. Read regularly one hour a week for three months to younger child any two collections of children's stories.
5. Teach at least five stories of merit to sister or brother so that the child can in turn tell them.
6. Successfully tutor brother or sister in any study.
7. Is known as spending many hours with the younger members of the family in a helpful and kind way.
8. Train a brother or sister in Woodcraft work so that the child stands well in the Band or Tribe.
9. Be little mother, that is, the real daily guardian of one or more younger children for three months, dressing, undressing, and washing them in that time.
10. Teach two or more children to sing a song, or dance, or to act in some play for public presentation.
11. Teach one or more children the alphabet.
12. Teach one or more children the notes in music.
13. Lead an outdoor nature class of four or more children for three months.
14. Teach any child the rudiments of another language.
15. Teach any child to make a basket, a bird box, a clay pot, a grass rug, or other useful article.
16. Teach a child to sew, knit, embroider, crochet, or weave.

### Business

(Anokiwin)



The Degree of Business may be conferred on any one who takes fifteen of these tests:

1. Write a letter of application for a position; a letter ordering goods and a letter of acknowledgment.
2. Write good personal letters of acceptance, regret, and sympathy.

3. Know simple bookkeeping, explaining interest, percentage, and discount.
4. Take dictation at the rate of fifty words a minute.
5. Transcribe letters on the typewriter at the rate of twenty-five words a minute.
6. Write a good clear hand.
7. Keep exact and full account of personal receipts and expenses for six months.
8. Have a clear record for punctuality for four months.
9. Be successful at a position for four months.
10. Be self-supporting.
11. Save 10 per cent. of allowance or income for six months.
12. Plan detailed cost of living for a family of six, four being children.
13. Earn money enough to go on a vacation or to send some one else on a vacation for two weeks or more.
14. Act as treasurer of your Woodcraft Tribe, or Sunday-school class, etc., for six months, keeping correct accounts.
15. Keep a bank account, either for yourself or some other person, for six months; draw checks, endorse checks, make deposits, and balance check book with bank book each month.
16. Write an article of 1,000 words on Business Pensions and Insurance Systems.
17. Describe the work of three organizations interested in labor conditions of men or women, such as Trades Unions, National Consumers' League, National Civic Federation, etc.
18. Write a paper of not less than 1,000 words describing your State Laws affecting the property rights of women, and also inheritance laws, including right to sue for damages in case of accident to child.
19. Earn \$25 by some industry—flowers, bees, tutoring, craftwork, etc.
20. Have earned Tribal and National dues by a Woodcraft exhibition of craftwork, etc.

### Camper

(*Gabeshiked*)



The Degree of Camper may be conferred on any one who takes ten of these tests: (the first three being required)

1. Know how to choose a camp site and how to prepare for rain.
2. Know how to build a latrine (toilet).

3. Know how to dispose of the camp garbage and refuse.
4. Light fifteen fires in succession with fifteen matches, at different places, one, at least, on a wet day.
5. Put up a two-man tent alone, ten times, for actual service, ready for storms.
6. Make the fire with rubbing-sticks of own preparation.
7. Boil water in fifteen minutes with one match, one log, one axe; one quart of water in a two-quart pail.
8. Make a willow bed, or a rush mat, or an equally good one of wild material.
9. Make a waterproof roof of wildwood materials.
10. Cook twenty-one digestible meals with ordinary camp outfits, for at least three persons.
11. Know how to make a raft.
12. Sleep out 100 nights (no roof but canvas); not necessarily consecutive nights.
13. Travel 500 miles, all told, in canoe, on foot, or in saddle, while sleeping out.
14. Have charge of a camp of five or more for seven suns (one week) and keep all going in good shape.

### Camp Cook

(Chabakwed)



The Degree of Camp Cook may be conferred on any one who takes six of these tests:

1. Make a good fireplace of wood, of stone, or earth.
2. Light fifteen fires with fifteen successive matches, one on a wet day.
3. Bake five batches of good bread in a Dutch oven.
4. Bake five batches of good bread in a frying pan before the open fire.
5. Cook twenty-one digestible meals over campfire for a party of two or more.
6. Boil a quart of water in a two-quart pail in ten minutes.
7. Cook a meal consisting of baked bread, fried meat or fish, roast meat or boiled potatoes without any utensils or tools but a hatchet.
8. Train a class in cooking, showing and making them do it properly.



**Camp Craftsman***(Eokid)*

The Degree of Camp Craftsman may be conferred on any one who takes fifteen out of these tests:

1. Have a knowledge of tanning and curing.
2. Sole and heel a pair of boots, or shoes, sewed or nailed, and generally repair footwear.
3. Dress a saddle, repair traces, stirrup leathers, etc., and know the various parts of harness.
4. Patch a garment.
5. Make a lace or a button of a leather patch.
6. Make set of six camp chairs and a camp table.
7. Make a waterproof vessel of birch bark.
8. Repair a broken boat or canoe.
9. Repair a tent cover so it will not leak.
10. Make an axe helve or a hoe handle.
11. Repair a leaky kettle or pot.
12. Solder a tin.
13. Make a basket of wildwood materials.
14. Make an Indian bed.
15. Make a grass mat.
16. Fell a six-inch tree in sixty seconds and drive with it a given stake.
17. Cut down a six-inch tree, and chop and split it into stove wood, using axe only.
18. Cut and flat with two true surfaces a log like a railway tie, eight feet long, nine-inch face, and six inches thick, using axe only.
19. Distinguish between rip saw, crosscut, keyhole saw, two-handed crosscut, and show how they are used.
20. Show the right and wrong way of putting nails into two boards, one of which is to be fastened across the other.
21. Make a boat or a birch canoe.
22. Build a log cabin.

**Camp Doctor***(Mashkiki)*

The Degree of Camp Doctor may be conferred on any one who takes twenty out of these tests: (the first four being required)

1. Demonstrate the Schaefer method of resuscitation.

2. Pass first-aid tests of Red Cross Society.
3. Know how to treat for bad sunburn.
4. Know poison ivy, sumac, oak, etc., and the proper treatment for cases of poisoning by these.
5. Carry a person down a ladder.
6. Bandage head and ankle.
7. Demonstrate treatment of wound of the neck with severe arterial hemorrhage.
8. Treat mangled injury of the leg without severe hemorrhage.
9. Demonstrate treatment for rupture of v        veins of the leg with severe hemorrhage.
10. Show treatment for bite of finger by mad dog.
11. Demonstrate rescue of person in contact with electric wire.
12. Apply tourniquet to a principal artery.
13. State chief difference between carbolic poisoning and intoxication.
14. Write a statement on the care of the teeth.
15. State a principle to govern in eating, and state in the order of their importance five rules to govern the care of the health.
16. Be able to tell the difference in effect of a cold and hot bath.
17. Describe the effect of alcohol and tobacco on the growing boy.
18. Tell how to care for the feet on a march.
19. Describe the effect of walking as an exercise.
20. Know how to treat sprains.
21. Tell how athletics may be overdone.
22. State what the chief causes of each of the following diseases are: tuberculosis, typhoid, malaria.
23. Tell what should be done to a house which has been occupied by a person who has had a contagious disease.
24. Tell how they may coöperate with the board of health in preventing disease.
25. Describe the method used in their community in disposing of garbage and the evil effect of flies.
26. Tell how a city should protect its foods: milk, meat, and exposed foods.
27. Tell how to plan the sanitary care of a camp.
28. State the reason why school children should undergo a medical examination.
29. Must know what wood herbs, etc., or camp staples will

produce sweat, purge, vomit, or warmth; what will make a quick poultice, which will check diarrhoea, etc.

30. Make, use, and teach others to use, the Indian Sweat Lodge.

31. Teach a class in first aid.

### Canner

(Atassowin)



The Degree of Canner may be conferred on any one who takes eight of these tests:

1. Gather or personally select and can twelve pints of strawberries or other small fruit so that six months later they have lost neither color nor flavor.
2. Ditto for other fruit such as peaches and quinces.
3. Ditto for vegetables, such as corn, green peppers, onions, etc.
4. Preserve, jam, or marmalade twelve pints of fruit.
5. Make three dozen glasses of jelly (without any artificial jelly maker).
6. Can or preserve successfully three kinds of fish.
7. Can or preserve successfully a chicken.
8. Can or preserve successfully three pounds of beef.
9. Win a prize for canning, jelly making, or preserving at any important fair.
10. Make three pounds of (any kind) glace or candied fruit, cherries, cranberries, pineapple, orange, nuts.
11. Spice three quarts of fruit, peaches, pears, cherries, etc.
12. Make four kinds of tomato preserve (two ripe and two green) and pickle watermelon rinds.

### Canoeman

(Chemaunigan)



The Degree of Canoeman may be conferred on any one who takes fifteen of these tests:

1. Tie rapidly six different useful knots.
2. Splice ropes.
3. Find, collect, prepare, and use "wattap," that is spruce roots, for canoe binding, etc.
4. Find, collect, prepare, and use gum for canoe gumming.
5. Use a palm and needle.
6. Fling a rope coil.

7. Row, pole, scull, and steer a boat; also bring a canoe or boat properly alongside and make fast.
8. Build a boat or canoe.
9. Make a paddle and paint it Indian fashion.
10. Repair a boat or canoe.
11. Know the laws of mooring, beaching, caching, or portaging a canoe, also how to sit in it and how to change seats with another when afloat.
12. Swim 100 yards.
13. Swim fifty feet with shoes, pants or skirt, and shirt on.
14. Sail any two-man craft for 200 miles in a season—the other man not a professional sailor.
15. Paddle (single) a canoe on dead water one mile in twelve minutes.
16. Spill a canoe, get in again and bale it out without help.
17. Take canoe camper's honor, that is, make a continuous canoe or rowboat trip of at least 500 miles, sleeping out every night.
18. Have a knowledge of weather-wisdom and tides.
19. State direction by the stars and sun.
20. Steer by compass.
21. Teach a class to handle a canoe.

### Carpenter

(Mokodasso-Winini)



The Degree of Carpenter may be conferred on any one who takes ten of these tests:

1. Know how to drive a nail so as not to split a board, also how to sink, clinch, or draw the same.
2. Know the use of square, level, plumb line, mitre, and chalk line.
3. Lay out a right angle by the 3, 4, 5 plan.
4. Shingle a square—that is, a portion of roof—ten feet each way.
5. Make any plain, useful piece of furniture in good workmanship manner.
6. Make any piece of carved piece of furniture in good style.
7. Toys—make and paint a set of wooden toys for some child.
8. Repair any important piece of furniture seriously out of order.
9. Build a small shed or cabin so as to make it safe and weatherproof.

10. Make a box of dovetailed corners.
11. Make a pair of tilting stools according to the rules; i.e., circular on top, fifteen inches across, about twenty inches high on four legs, so widespread at the bottom that they cannot upset.
12. Make a pair of tilting spears as per "Birch Bark Roll."
13. Make a rustic four-poster for a willow bed.
14. Make boards for Four Fires so that the sides fold up around candle-sticks. (See drawing, page 9, Girl's Manual.)

### Citizen

(*Kitchi-odena-winini*)



The Degree of Citizen may be conferred on any one who takes eleven of these tests:

1. Have a record in your tribe as being an intelligent, thoughtful member who has at all times been public spirited.
2. Hold an office in your tribe, club, Sunday-school class, etc., and have a record of being efficient and of working for the best interests of the group.
3. Know the principal offices of your city or town, whether elected or appointed, and the term of office.
4. Describe the duties of these officers, also of the city or town departments such as police, fire, etc.
5. Do you have any relationship with these departments? Describe how a young person would have relationships without assuming the duties of manhood or womanhood.
6. How are the laws under which you live made? What bodies make laws for you? Describe the process.
7. How is crime punished in your city or town? Describe process, civil and criminal. In each case show steps till the case has reached the highest court.
8. Tell what effect the fear of "snitching" or tale bearing has on running of schools and of the government in general.
9. Name the principal offices of the state government. Describe their duties, term of office, also the duties of the various departments.
10. Name the principal officers of the National Government. Describe their duties, term of office, also the duties of the various departments.
11. Show yourself familiar with the history and provisions of the Declaration of Independence, also the Constitution of the United States.

12. What are the qualifications of voter in your state or territory?
13. Name the states and territories in which women have equal rights with men.
14. Name those in which they have partial rights.
15. Tell how a foreigner may become a citizen of this nation.

### Colonial Housekeeper

(Gaiat)



The Degree of Colonial Housekeeper may be conferred on any one who takes fifteen of these tests:

1. Gather bayberries and make four candles dipped or moulded, each six inches long, for the Four Fires.
2. Leach the ashes and make a pint of soft soap.
3. Dye evenly four pieces of dress goods not less than half a yard each of four different colors or four skeins of yarn. Dyes may be bought.
4. Dye twelve squares of felt or white flannel each about 4 x 4 inches, each a different color with stuff found in the woods such as butternut bark, golden oak, sassafras, goldenrod tops, pokeberries etc. (Tea and coffee allowed.)
5. Make a lavender box, i. e., grow, gather, dry and use the lavender in a clothes chest. Same for lemon verbena (*trippolium*).
6. Potpourri—make one quart when dried and spiced.
7. Make one pint of elder-flower water or one pint cucumber juice toilet wash, or one pint of hazel extract.
8. Gather and make marigold salve (*calendula*) and *prunella* salve (*self-heal*) or witchhazel salve.
9. Make cherry balm of black cherry bark.
10. Gather sassafras leaves and make a gumbo soup.
11. Gather the sap and make of it a pound of sugar, either from maple or ash-leaved maple.
12. Make two pounds of lemon or orange sugar.
13. Make two quarts of lemon, citron, or orange peel or glaze fruit.
14. Make four quarts of mincemeat.
15. Make four quarts of preserves, pickles, or jellies.
16. Brew sage tea, mullein tea, boneset tea, camomile tea, and ginger tea.
17. Gather and make half a pound candied sweet flag (*calamus*), mint leaves, rose leaves, or violets.

18. Make one half gallon of tutti frutti.
19. Dry corn, spice, salt, or otherwise preserve three kinds of meat or fish for household border.
20. Dry five quarts of fruit, or vegetables, for winter use.
21. State what fruits can be preserved in clear, cold water alone uncooked, and why.
22. Knit or crochet any usable article of wearing apparel.
23. Spin enough cotton, flax, wool, or hemp to make five yards of stuff or half a dozen pairs of socks.
24. Weave ten yards of cloth or rag carpet, or rug or bed-spread.
25. Cut, select, sew, ball, and arrange for the making of a good rag carpet.
26. Make single-handed a rag rug, braided or hooked.
27. Make appliqué quilt or patchwork quilt.
28. Make a grandmother's sampler.
29. Make, decorate, and stuff a pincushion.
30. Ditto, hop pillow.

### Conservator

(*Ganawenima*)



The Degree of Conservator may be conferred on any one who takes twelve of these tests:

1. Make and distinguish the most important lumber trees of your state.
2. Name and distinguish the three or four next in rank.
3. Name three trees that have neither lumber nor firewood value but are useful as shade trees, bird food, or bank binders.
4. Know the twenty-five principal song birds of your state.
5. Know the twelve principal game birds of your state.
6. Know the twelve principal four-foots of your state.
7. Mention three animals that serve no commercial purpose but which ought to be preserved because they are harmless and give pleasure to all who see them.
8. Be a member of the Audubon Society, or Agassiz Association.
9. Be a member of the local bird club.
10. Support such local societies as aim to preserve or re-introduce wild birds or desirable plants.
11. Make and put up ten bird boxes at least one of which must be nested in.
12. Make and run a bird's lunch counter all winter, feeding at least four kinds of birds not counting the English sparrow.

13. Make and run a bird bath successfully.
14. Make and run a bird restaurant.
15. Write a 500-word essay on the value of birds to crops (See Bulletin of Department of Agriculture).
16. Write a 500-word essay on value of forests to insure water supply (See Forestry Bulletins).
17. Mention the four chief natural resources of your state.
18. Mention and give figures on the four chief natural resources of the United States.
19. Describe the Sanctuary Scheme of which the Yellowstone Park was the first great example, and tell how it has succeeded, and how far it has been copied.

### Cradle Craft

(Oshki-Abinodji)



The Degree of Cradle Craftsman may be conferred on any one who takes fifteen of these tests:

1. How much should a baby grow in weight each week for the first six months? Keep record of some baby for this length of time.
2. How much should a baby grow in height during this time?
3. Give symptoms of fits or convulsions. State what to do in either case.
4. Give symptoms of croup. How treated.
5. State how to tell if a baby is uncomfortable from light clothing, pins, etc.
6. Give three common complaints of babies, and your reasons for diagnosis and treatment of each.
7. State how often a baby one month old should be fed. Three months; six months; one year.
8. State how many hours a baby should sleep at one month; three months; six months; one year.
9. Take charge of two children for one week so the mother can take a holiday.
10. Act as Mother's Helper for one month.
11. Make a baby's outfit complete.
12. State which are healthier and why, breast or artificially fed babies.
13. State how much feeding a baby should be given in twenty-four hours at six months; one year.
14. State what is the best kind of milk. How cared for after delivered.



15. State how milk is pasteurized.
16. State at what age a baby should be given meat juices and how much daily. Prepare a meat juice.
17. Tell the value of fruit juice (orange, prunes, etc.) to a baby's diet. At what age should a baby be given fruit juice and how much daily?
18. State how carrots, spinach, and potatoes should be prepared for a baby and at what age a baby should eat vegetables.
19. Give the care of nursing bottles and nipples, and a good solution to keep nipples in.
20. State what is the best way to care for artificially prepared food, and how much should be made at one time.
21. State why nitrate of silver should be dropped into every new-born baby's eyes.
22. Describe proper way of bathing a month-old baby—when it should be bathed, temperature of water, room, etc. How to test the water without a thermometer.
23. State what should be the care of a baby's eyes, mouth, etc.
24. Know value of fresh air for baby; danger of too much clothing; of bouncing; rocking; pacifiers.
25. State at what age children begin to form habits. And methods of training for three habits.

### Dancer

(*Namid*)



The Degree of Dancer may be conferred on any one who takes six of these tests:

1. Dance four folk dances such as beansetter, ox-dance, Morris dance, Maypole, ribbon dance, etc.
2. Dance a good cakewalk.
3. Dance two gypsy dances. (Spanish or Hungarian gypsy.)
4. Dance four standard ballroom round dances, such as waltz, polka, Boston, three-step, etc.
5. Dance five modern dances.
6. Dance one standard Scottish dance, such as Highland fling, Scottish reel, sword dance, and fire dance, or dance two Irish dances, as jig, reel, hornpipe, double shuffle, clog, etc.
7. Dance two standard Indian dances—as Lone Hunter, Storm Cloud, Caribou dance, Zuni spring dance, etc.
8. Dance two Greek dances.
9. Dance the minuet.
10. Dance the quadrille, lancers, and Virginia reel.

11. Lead in two children's dances such as Sally Waters, chair dance, Mulberry Bush, A Hunting We Will Go.

12. Teach a class at least four dances representing four different departments as above.

13. Dance two Japanese dances. (One posture dance and one spear dance.)

14. Dance the dance of the Golden Sari, and a fire dance.

Note: Music of folk dances and Indian dances can be had on Columbia records, Education Department list.

### Entertainer

(*Tchessakid*)



The Degree of Entertainer may be conferred on any one who takes fifteen of these tests:

1. Tell entertainingly a good story to a group of young people five different times.
2. Tell standard children's stories to a group of not less than five one hour a week for two months.
3. Recite well five poems, orations, or stories which are in keeping with the occasions and entertaining.
4. Sing alone from memory the five American folk songs you like best. Tell why you like them.
5. Ditto for five English folk songs.
6. Ditto for five Scotch folk songs.
7. Ditto for five Irish folk songs.
8. Ditto for five folk songs of any other nation.
9. Act as accompanist at least six times for some public event in school, church, etc.
10. Take part on three or more occasions as a member of a quartet, glee club, chorus, or as a member of an orchestra, band, etc.
11. Play an instrumental solo at three public occasions.
12. Give a party, arranging program of entertainment and refreshments, the latter not to cost more than fifteen cents per person.
13. Entertain younger people on five different occasions—introducing song, story, dance, or manual training.
14. Write a play which is used for public performance.
15. Do successfully six parlor tricks in sleight of hand.
16. Do successfully six parlor tricks of impersonation.
17. Do successfully six moving pictures of given subjects

such as Sleeping Beauty, Red Riding Hood, Old Mother Hubbard, etc. (acting the story or rhyme out in pantomime).

18. Put on shadow charades in camp or shadow moving pictures with sheet and lantern.

19. Take part in folk dancing at three public events.

### Farmer

(*Kiligewin*)



The Degree of Farmer may be conferred on any one who takes nineteen of these tests:

1. Explain the nature of soil, its texture and need of water and air.
2. Describe four different kinds of soil; explain what these lack, and how it should be added to make agriculture successful.
3. State how to decide what fertilizer is needed in a given soil.
4. Mention ten leading standard fertilizers, and indicate their peculiar qualities and value.
5. Mention all the leading crops of your neighborhood. Tell how you would rotate them and why.
6. State when to sow wheat, oats, rye, barley, buckwheat, and when to reap each.
7. State when to sow peas, corn, millet, kaffir corn, and when to reap each.
8. State when to plant turnips, potatoes, and carrots; tell how you would rotate them and why?
9. State when to sow clover alfalfa, timothy, tobacco, and tell how you would rotate each and why.
10. Plow ten acres of land.
11. Harrow ten acres of land.
12. Seed down ten acres of land.
13. Weed down ten acres of land.
14. Harvest ten acres of land.
15. Cut, make, and harvest ten acres of hay.
16. Describe the methods and value of drainage.
17. Explain the value and best use of stable manure.
18. Make a seed tester and test the germination of three kinds of crop seeds, one hundred seeds of each kind. "Rag-baby" tester for corn.
19. State why a farmer should watch the United States weather reports.
20. State why a farmer should watch the market.

21. State how chickens can be made to pay on a farm.
22. State how cows can be made to pay on a farm.
23. State how pigs can be made to pay on a farm.
24. Identify ten common weeds and tell how to get rid of them.
25. Identify ten bad bugs and tell what they do and how to get rid of them.
26. Plan a barn and tell why bank barns have lost favor.
27. Plan and construct successfully a silo. Explain its advantages.
28. State what is the advantage of fall plowing.
29. State when and why one should summer-fallow.
30. State what is the advantage of pedigreed over rough stock.
31. State how you would decide whether a given field was fitted for profitable agriculture, grazing, or forestry.
32. Explain the reason clovers and certain legumes restore nitrogen to the soil.
33. Have inoculated seeds of clovers, cowpeas, etc., and grown demonstration strips and compared the increase of nodules on roots of inoculated plants.
34. Explain the value of lime on poor land.

### Fisherman

(Gagoiked)



The Degree of Fisherman may be conferred on any one who takes nine of these tests:

1. Catch and name ten different species of fish: salmon or trout to be taken with flies; bass, pickerel, or pike to be caught with rod or reel, muskallonge to be caught by trolling.
2. Make a bait rod of three joints, straight and sound, fourteen ounces or less in weight, ten feet or less in length, to stand a strain of one and a half pounds at the tip, 13 pounds at the grip; or else make a jointed fly-rod 8 to 10 feet long, 4 to 8 ounces in weight, capable of casting a fly sixty feet.
3. Name and describe twenty-five different species of fish found in North American waters, and give a complete list of the fishes ascertained by himself to inhabit a given body of water.
4. Give the history of the young of any species of wild fish from the time of hatching until the adult stage is reached.
5. Make a net and catch a fish in it.

6. Make a turtle trap and catch a turtle in it.
7. Make a six-foot leader of clean gut, with smooth knots to stand a strain of five pounds.
8. Take with the fly, unassisted, a three-pound trout, landlocked salmon, or bass, or a twelve-pound salmon, on a rod not more than five ounces in weight.
9. Or else take on a rod, without assistance in hooking, playing, or landing a trout, black bass, pike (muskellunge), grayling, salmon, bluefish, weakfish, striped bass, kingfish, sheepshead, or other game fish, whose weight in pounds equals or exceeds that of the rod in ounces.
10. Cast a fly with a rod of five ounces, or less, not over ten feet long, sixty-five feet. Or, with one quarter of an ounce dummy frog, five-foot rod, outdoors overhead casting, tournament style, send it eighty feet if under eighteen, one hundred and ten if over.
11. Swim a hundred yards.
12. Paddle (single) a canoe one mile in twelve minutes.
13. Row without help one mile in ten minutes.

## Food Craft

(Midjim)



The Degree of Foodcrafter may be conferred on any one who takes ten of these tests:

1. Know a balanced diet for daily living that will meet requirements of the body.
2. Know the value of cereals and the proper preparation of corn, wheat, rice, barley, and rye for bread and porridges, etc.
3. Cook in camp or at home for a week for four people.
4. Understand the terms proteids, carbohydrates, and tell which foods contain them, in what proportion, and whether available for the human body and whether easily assimilated.
5. Know a balanced vegetarian diet and prepare menus for same for a week.
6. Know the local wild plants available for salads and prepare a salad of same.
7. Dry sweet green corn for winter use, either in sun or in oven. Other vegetable may be substituted, if dried in same way.
8. Dry any fruits for winter use—apples, peaches, cherries, etc.

9. Know how to prepare kumyss and whey.
10. Know how to prepare "cottage cheese."
11. Bake five batches of good bread, one to be raisin bread.
12. Train a class in cooking, showing and making them do it properly.
13. Tell how a city should protect its foods, milk, meat, and exposed foods.
14. Write a statement on the various digestive processes—in the mouth, in the stomach, in the intestines.
15. Know what fruits and vegetables can be put up for winter use by the "cold water process" sealing without cooking. Explain why these fruits will not spoil.
16. Put up for family use fifty quarts of fruits or vegetables in one year.
17. Put up fifty glasses of jelly, using no commercial article to make the fruit "jell," but if necessary using a second fruit in combination for that purpose. Explain the process of jellifying.

### Forester

(*Mitigwakid*)



The Degree of Forester may be conferred on any one who takes eighteen of these tests:

1. Identify twenty-five kinds of trees when in leaf, or fifteen kinds of deciduous (broad leaf) trees in winter, and tell some of the uses of each.
2. Identify twelve kinds of shrubs.
3. Collect and identify samples of thirty kinds of wood and be able to tell some of their uses and peculiar properties.
4. Determine the height, and estimate the amount of timber, approximately, in five trees of different sizes.
5. State the laws for transplanting, grafting, spraying, and protecting trees.
6. Make a collection of sixty species of wild flowers, ferns, or grasses dried and mounted in a book and correctly named.
7. Recognize in the forest all important commercial trees in one's neighborhood.
8. Distinguish the lumber from each and tell for what purpose each is best suited.
9. Tell the age of old blazes on trees which mark a boundary or trail.
10. Recognize the difference in the forest between good and

bad logging, giving reasons why one is good and another bad.

11. Tell whether a tree is dying from injury by fire, by insects, by disease, or by a combination of these causes.

12. Know what tools to use in lumbering.

13. Know how to fight fires in hilly or in flat country.

14. Know the effect upon stream-flow of the destruction of forests at head waters.

15. Know what are the four great uses of water in streams.

16. Know what causes the pollution of streams, and how it can best be stopped.

17. Know how, in general, water-power is developed.

18. Tell, for a given piece of farm land, whether it is best suited for use as a farm or forest, and why.

19. Point out examples of erosion, and tell how to stop it.

20. Estimate closely how much timber and how much cordwood is in a given acre of woods.

21. Name six trees that will float when green, and six that will not.

22. Know something of the relation of birds and quadrupeds to forest trees.

23. Fell a six-inch tree in sixty seconds, driving with it a given stake.

24. Make 100 trees grow where none grew heretofore.

25. Camp in the woods for thirty nights.

26. Teach a class the rudiments in forestry.

## Frontiersman

(Gimab)



The Degree of Frontiersman may be conferred on any one who takes eight of these tests:

1. Milk a cow.

2. Interpret from any one language into English.

3. Fell a tree in a given place.

4. Weld an iron.

5. Temper a knife.

6. Solder a tin.

7. Shoot to win honors with a rifle.

8. Tie six kinds of knots.

9. Make a thread lashing.

10. Use an axe correctly.

## Gardener

*(Kitigan)*

The Degree of Gardener may be conferred on any one who takes fifteen of these tests:

1. Do all the work in a successful flower garden not less than twenty feet by twenty feet.
2. Do the same for a fruit and vegetable garden.
3. State what are the ten most common weeds. Describe and tell how to overcome them.
4. State what are the ten most harmful insect pests. Describe and tell how to combat them.
5. Raise a crop of flowers or berries for market and show by a balance sheet that it has paid.
6. Make a successful window box.
7. Raise a crop of potatoes on a patch of one twentieth of an acre.
8. Raise half a dozen each of two of the following: cucumber, tomatoes, egg plant, pumpkins.
9. Distinguish twenty different kinds of garden flowers and tell where they grow best and when.
10. Distinguish twenty different kinds of small garden fruits and tell how to manage them.
11. Distinguish six different kinds of apples and tell of their qualities.
12. Describe a cold frame and its use.
13. Describe a hothouse and its use.
14. State what is layering.
15. State what is budding.
16. State what is grafting.
17. State what is root pruning.
18. Which do you prefer to have in the garden—ducks or hens?—and why?
19. Plant a plot with pedigreed seed (furnished by the Department of Agriculture) and report fully on the results.
20. Make a garden calendar, stating the order of bloom, so that from April to September there is a flower for each week.
21. Have a successful perennial vegetable garden—rhubarb, asparagus, mint, horseradish, etc.
22. Take a prize at National, State, or county fair for flowers or vegetables grown by self.
23. Send a bouquet a week to hospital or "shut-in" or Flower Guild from own flower-beds for six months.



24. Keep the front garden in good shape, clean and trim all summer.
25. Keep the back garden in shape.
26. Build a summer house in it.
27. Plant and grow vines or trailers enough to cover the summer house.

### Gleeman, or Camp Conjurer

(Nagamed)



The Degree of Gleeman may be conferred on any one who takes eight of these tests:

1. Open and lead the Council.
2. Light the Sacred Fire with rubbing-sticks.
3. Know the Indoor and Outdoor Council Ceremony.
4. Know the ceremony of giving names.
5. Sing many songs, including the Muje Mukesin, Omaha, Zon-zi-mon-de, Bark Canoe, alone or as a leader.
6. Dance the three standard Indian dances.
7. Tell many stories.
8. Know the art of "making medicine," which is the making of goodfellowship by seeking out talent, selecting and leading it and stopping without offending those who are not helpful.
9. Know how to conduct in initiations and have the wisdom to stop them in decent season.
10. Know when to sing the Good-night Song when good-night time has come.
11. Camp out thirty nights.
12. Teach some one else to run the Council.
13. Teach a dance to a sufficient number to give it.

### Handihelp

(Wadokaged)



The Degree of Handihelp may be conferred on any one who takes eighteen of these tests:

1. Paint or varnish a door, wall, floor, table, chair, or any large piece of furniture.
2. Whitewash or kalsomine a ceiling or wall.
3. Replace a gas mantle.
4. Solder a joint and solder some broken metal toy.
5. Pack a spigot.
6. Repair electric bell.
7. Lay carpets and mattings.

8. Repair furniture or china.
9. Sharpen five knives.
10. Make flour paste for wall papering and for photo-pasting that keeps.
11. Fix fly-screens in windows or doors and repair two or more screens.
12. Adjust a lock so the latch works.
13. Put a new pane in the window, putting neatly.
14. Know how to putty up nail holes and fill cracks in floors.
15. Build a henhouse for six or more fowls.
16. Make a successful bird house.
17. Make a cement bird bath.
18. Lay a straight stone and cement walk with a corner.
19. Make mortar.
20. Build a dry stone wall.
21. Make whitewash that will not rub off (Government recipe).
22. Wall paper a room.

### Herald, or Crier

(Bibaged)



The Degree of Herald may be conferred on any one who takes ten of these tests:

1. Walk one mile in eleven minutes.
2. Walk thirty miles in twelve hours.
3. Run 100 yards in thirteen seconds.
4. Run one mile in five and one third minutes.
5. Swim 100 yards.
6. Sleep out thirty nights.
7. Send and receive a message in one of the following systems of signaling: Semaphore, Morse, or Myer, not fewer than twenty-four letters per minute.
8. Make correct smoke signals meaning "Camp is here," "I am Lost," "All well," "All's come to Council."
9. Talk Sign Talk, knowing at least 200 signs.
10. Know the twenty-five signs and blazes of the Indian code.
11. Read and translate into one's own language a page or conversation from some other language.
12. Conduct a Council.
13. Know the ordinary rules of courtesy, precedence, introduction, salutation, etc.

14. Know the history of the National Flag and the proper way of saluting, etc.

15. Teach half a dozen persons to qualify in No. 14.

### Home Cook

(*Tchibakwe—Wigamag*)



The Degree of Home Cook may be conferred on any one who takes fourteen of these tests:

1. Make up an appetizing and satisfactory vegetarian diet for one week for a family of four persons.
2. Do all cooking at home, three meals a day, for one week for a family of not less than four persons.
3. Make up satisfactory menus and superintend cooking for family of three or four persons for one month, preparing at least one meal a day.
4. Prepare and pack a dainty, satisfying picnic lunch for four persons.
5. Demonstrate fireless cooker successfully on meats, vegetables, cereals, and fruits.
6. Demonstrate paper-bag cookery and explain its value on not less than four foods.
7. Prepare and serve from chafing dish four appetizing dishes.
8. Wash all dishes and utensils for the household using especial methods for silver, brass, glass, china, aluminum, copper etc.
9. Arrange flowers and foliage for the dining table, also for sick rooms, trays, etc.
10. Understand proper hydration of cereals, that is, what proportion of water to use in cooking rice, oats, etc.
11. Bake three batches of light yeast-raised bread and tell importance of thoroughly baking same.
12. Bake three batches of biscuits, soda raised.
13. Bake two batches of pancakes, one using fresh sweet milk and the other sour or butter milk.
14. Make plain and French pastry that will digest readily.
15. Make bread or biscuits using methods of four different nationalities.
16. Bake four good sweet cakes: layer, loaf, ginger, and cookies.
17. Cook meat in four ways: roast, broil, fricassee, and stew or boil. Know which cut is most suitable for each way.
18. Cook fish three different ways: broil, fry, and bake.

19. Cook up in four acceptable ways left-over meats such as croquettes or en casserole.
20. Make veal loaf or beef loaf, chicken jelly, or other meats known as delicatessen specialties.
21. Make two meat soups; one must be clear.
22. Make two vegetable soups; one purée.
23. Make two milk soups; one tomato bisque.
24. Make a Welsh rarebit; must be short and digestible.
25. Make eight salads: three fruit, two vegetable, two meat or fish, and one plain lettuce. Prepare two different dressings.
26. Cook eggs for family of four in six different ways. Must include poached, two-minute boiled, and two different omelets.
27. Prepare eight desserts: one gelatine, two boiled, two baked, two frozen, and one mixed fruit dessert.
28. Prepare four cold drinks: lemon or orange ade, gingerpop, oatmeal water; four different salads; six different sandwiches; two kinds of candy or nuts; tea, coffee, and demi tasse.
29. Make fudge, peanut brittle, butter scotch, pulled molasses candy, and one candied fruit.

### Horseman

(Bebamomigod)



The Degree of Horseman may be conferred on any one who takes ten of these tests:

1. Show that you are at home in a saddle and can ride at a walk, trot, and gallop.
2. Know how to saddle and bridle a horse correctly.
3. Catch six horses in corral or on range with twelve throws of the lasso.
4. Show how to water and feed and to what amount, and how to groom a horse properly.
5. Show how to harness a horse correctly in single or double harness and to drive.
6. Pack 100 lbs. of stuff with diamond hitch, to stay during four hours of travel or two miles of trotting.
7. Have a knowledge of the power of endurance of horses at work and know the local regulations concerning driving.
8. Identify unsoundness and blemishes.
9. Know the evils of bearing or check reins and of ill-fitting harness or saddlery.
10. Know two common causes of, and proper remedies for,

lameness, and know to whom such cases of cruelty and abuse should be referred.

11. Be able to judge as to the weight, height, and age of horses.

12. Know three breeds and their general characteristics.

13. Be able to treat a horse for colic.

14. Describe symptoms and give treatment of horses for the following: wounds, fractures and sprains, exhaustion, choking, lameness.

15. Understand horseshoeing.

16. Clear a four-foot hurdle and an eight-foot water jump.

17. Pick up hat from the ground going at full gallop on a horse not less than thirteen hands high.

### Hostess

(*Ashangekive*)



The Degree of Hostess may be conferred on any one who takes ten of these tests:

1. Know the ordinary rules of courtesy, precedence, introduction, salutations, toasting.

2. Have written correct notes of invitation, acceptance, declination, sympathy, congratulations.

3. Act as host at a formal luncheon, dinner, or party of some kind to at least six people for which the invitations were self-written and menus supervised.

4. Plan and carry out an outdoor picnic or entertainment for a dozen or more guests at which refreshments are served.

5. State the reciprocal duties of host and guest during a visit of a week—meeting trains punctually, consideration of servants, etc.

6. Cook a chafing-dish supper for four people which is digestible and sufficient in quantity.

7. Tell stories and keep the guests interested, can suggest congenial amusements, seeing to it that no one person is left out of things, can also listen appreciatively and stimulate the entertaining powers of others.

8. Rise to emergencies and take charge of party or entertainment during absence of master of ceremonies, and carry same to successful finish.

9. Preside at a Council of Woodcraft Boys or Girls, opening and leading the Council.

10. Conduct initiations with discretion and kindness.

11. Is known as a dependable helper in entertainments of various kinds—not only in the amusement making, but in the work of preparation and cleaning up and general quiet usefulness.

12. Know how to prepare ten cooling drinks, ten salads, ten candies, ten sandwiches, tea, coffee, and cocoa.

13. Arrange flowers artistically, also table and house decorations for different seasons and occasions, making use of material available out of doors and not from florists.

14. Arrange special home entertainments for holidays, etc., knowing the history, games, foods, and drinks proper to each occasion.

15. Know how to give and receive a toast to a person on an occasion.

16. Know the rules of visiting and card leaving, P. P. C. cards, and bread-and-butter letters.

### Housekeeper

(Ostiwin)



The Degree of Housekeeper may be conferred on any one who takes fifteen of these tests:

1. Know how to care for floors—hardwood and carpeted—for walls, rugs, draperies, furniture—upholstered and varnished—for pictures and books.

2. Know how to prepare a room for general cleaning, including windows; what cleanser to use; also method for the daily putting room in order and dusting; also use of vacuum cleaner.

3. Know how to care for articles of silver, copper, glass, and marble.

4. Properly dispose of waste and garbage for the home for one week and know its proper disposal by the city and its proper disposal in the country.

5. Make up a bed with draw sheet for very sick patient and know how to properly air and change a bed, including the care of bedding from outdoor sleeping porches.

6. Air and make up a bed for a baby for a month or for an adult; to include changing of position of mattress, changing of springs, and sunning of pillows.

7. Wash and wipe dishes and leave dining-room in order after one meal a day, for one month. Air after each meal.

8. Take entire care of one room for one month, to include

sweeping, dusting, washing of windows, care of flowers or plants, and what may be desirable for attractiveness of the room, and its proper ventilation.

9. Put away clothing, rugs, furs, blankets for the summer in proper manner so they will not be moth eaten or wrinkled.

10. Take care of a cat, dog, bird, or a tame animal for one month.

11. Know what harm they may do, what diseases each may carry, and how these should be treated.

12. Know how to get rid of moths, stating seasons at which the larvæ eat.

13. Know how to get rid of rats, including the modern germ inoculation method.

14. Know how to get rid of mice, roaches, blackbeetles or cockroaches and bedbugs.

15. Scrub a wooden floor once a week for one month, or linoleum for two months.

16. Take entire charge of a pantry for one month, seeing that all shelves are absolutely clean and dishes spotless.

17. Clean ice-chest thoroughly twice a week for two months during the summer, and state how meats and foods should be arranged in the ice-chest.

18. Keep bureau drawers in order and dust shelves of book-case, wiping off books for one month.

19. Care for at least two kerosene lamps every day for a month, leaving no oil to smell, and trimming wicks so lamps do not smoke.

20. Know how to take care of the milk and cream from at least one cow, and see that the pails and pans, or bottles, are properly cleaned; state method.

21. Take care of a linen closet for a month, that is take care of four laundry bundles; return and check up with list, putting things away in order, and making out lists for following week's wash.

22. Have growing plants in house in winter, planted and taken care of by self.

23. Plan work for household of five (three children) so that two servants may do the work. What should be eliminated, and what insisted upon in such a household?

24. Make fire in coal range, and cook with it, at least ten times per year.

25. Make a supply for a family, of fruits and vegetables, canned, preserved, dried, or jellied.

26. Know how to prepare five cooling drinks, five sandwiches, five candies, five salads, and tea and coffee.
27. See that the family sleep with open windows all the year round, arranging for screens, and proper position of beds.
28. Understand gas range, and how to economize gas by use of lids and asbestos covering on top.

### Hunter

(Gaossed)



The Degree of Hunter may be conferred on any one who takes fourteen of these tests:

1. Walk one mile in eleven minutes.
2. Walk thirty miles in twelve hours.
3. Run 100 yards in thirteen seconds.
4. Run one mile in five and one third minutes.
5. Swim 100 yards.
6. Spot the rabbit (see Games) three times out of five at sixty yards.
7. See and map out six Pleiades.
8. See the Pappoose on the Squaw's back (spectacles allowed if habitually worn). (See "Stars as Test of Eyesight.")
9. Kill, according to the Campfire Law, any one big game animal.
10. Get a good photograph of a big game animal wild in its native surroundings.
11. Know and name correctly twenty-five native wild quadrupeds.
12. Know and name correctly fifty wild birds in the field and their nests.
13. Know and clearly discriminate the tracks of twenty-five of our common wild quadrupeds.
14. Trail an animal or else iron track prints for half a mile without aid of snow.
15. Win honors with rifle. That is, be a marksman according to the rules of the National Rifle Association.
16. With bow make a total score of 300 points at sixty yards, standard target.
17. Catch alive and uninjured with own make of trap one wild quadruped and one wild bird.
18. Know the Pole Star and fifteen star groups.
19. Teach any one of these but the first nine to some other person.



## Hunter in Town

(Odena-Goussed)



The Degree of Hunter in Town may be conferred on any one who takes eight of these tests:

1. Find and sketch twenty-five blazes in town and say where you found them. A blaze is a mark that conveys information without using words or letters.
2. Find twenty-five totems in town. A totem is the emblem of a man, group of men, company, or idea. It is not formed of words or letters and letters are not an essential part, even if they are associated. Some trademarks are of this class.
3. Indicate the distinguishing marks of policemen, park policemen, traffic squad, strong arm squad, etc.
4. Rid a house of flies for one month.
5. Rid a house of rats for one month.
6. Rid a house of mice for one month.
7. Trap or otherwise secure thirty English sparrows in a month.
8. In cities where they are outlawed trap or otherwise secure fifteen English starlings in a month.
9. Draw life-size, recognizable tracks of a man, woman, child, dog, cat, and mouse.
10. Draw life-size, recognizable tracks of a rat, rabbit, gray squirrel, sparrow, crow, chicken. All of these can be secured in and about the city, especially in the large parks, and are easiest when the snow is on the ground, but possible in mud or with even wet tracks on dry pavements.
11. Make and set up at some suitable place and operate for at least a week a flytrap. (On the screen-cone principle.)
12. Know gypsy moth and report finding of any to state entomologist.
13. When muzzling laws are passed report all infractions to police.
14. Provide satisfactory records of the tracks of three animals, according to the following method: cover a stiff sheet of paper with printers' ink and so place it that the animal runs over it and on to a fresh sheet of paper, which receives the tracks.

## Indian Craftsman

(Inanokiwin)



The Degree of Indian Craftsman may be conferred on any one who takes ten of these tests:

1. Follow a track one mile without help. Snow or tracking irons allowed.

2. Know fifty signs of the sign language.
3. Know six standard blazes.
4. Know the equivalent stone signs. Demonstrate in Council.
5. Know the equivalent twig signs. Demonstrate in Council.
6. Know the equivalent grass signs. Demonstrate in Council.
7. Know two standard tests of eyesight used by Indians.
8. Make a bead band at least eight inches long and one inch wide.
9. Make a piece of porcupine quillwork at least one inch by eight.
10. Make and paint an Indian four-post bed.
11. Carve and paint a totem pole, Chief's seat, or Tally Keeper's table.
12. Make and decorate a bench for Council Ring.
13. Make and decorate an Indian teepee.
14. Make and use a willow bed.
15. Make a pair of decorated leggings of good design.
16. Make a shield and spear for the Lone Hunter dance.
17. Make an Indian drum with decorations and stick complete.
18. Make a Navajo loom and weave a rug on it (grass wool with thirty warp strings is allowed).
19. Be responsible for locating, planning, and completing a Council Ring.
20. Make a dry painting for "Four Fires." Demonstrate at Council.
21. Construct a burlap deer according to "Book of Woodcraft."
22. Construct a burlap bear according to "Book of Woodcraft."

### Indian Lore

(*Anishanabe*)



The Degree of Indian Lore may be conferred on any one who takes sixteen of these tests:

1. Outline the religion of the high-class Indian. (See "Book of Woodcraft," page 21.)

2. State what were the Indian's special virtues.
3. State what were his special vices.
4. State what was the great mistake of his creed.

5. State why William Penn was peculiar in having no trouble with Indians.

6. Be the possessor of three genuine articles of old style Indian make, such as basket, beadwork, quillwork, silver work, pottery, stone work, blankets, war club, bow, quiver, arrows, peace pipe, etc.; and know to what tribe the makers belong, what materials were used in their construction, and how they were made. These may be got from the Mohonk Lodge Colony, Oklahoma, and so help the Indians.

7. Know the original hunting grounds, and give an outline of the history and present condition of the tribe where your Indian article was made.

8. Know the uses and meaning of the design or symbols on your Indian article, or something of the ceremony in which it is used.

9. Sing six genuine Indian songs in Council.

10. Tell six Indian legends at the Council.

11. Draw ten genuine Indian symbols and explain them.

12. Name the Indian tribes that originally inhabited your state. Give their present numbers and location, also their economic and religious condition.

13. Give brief sketch of the lives, aims, and achievements of four great or well-known Indian chiefs.

14. Give brief sketch of the lives, aims, and achievements of four great or well-known Indian women.

15. Be able to distinguish from each other four types of baskets characteristic of four different tribes.

16. Distinguish in general the pottery of four different tribes.

17. Be able to indicate and discuss the genuine Navajo blankets.

18. Be able to indicate and discuss the genuine Balleta.

19. Be able to indicate and discuss the genuine Chimayo.

20. Be able to indicate and discuss the genuine Hopi.

21. Be able to indicate and discuss the genuine Chilkat.

22. Be able to indicate and discuss the genuine Germantown.

23. Be able to indicate and discuss the genuine Serape.

24. Tell approximately the age of a blanket.

25. Distinguish the three or four general styles of beadwork and the regions of which they were characteristic.

26. Visit in person and stay at least a week with some tribe that is not scattered.

27. Name the Six Nations, the Plains Indians, the different tribes of Pueblo Indians, the coast (California) tribes, the Alaskan Tribes, or the Central American Tribes.

28. Know fifty signs of the sign language.

### Laundry Expert (Kisibigaige-Winini)



The Degree of Laundry Expert may be conferred on any one who takes fourteen of these tests:

1. Do a family washing of mixed white and colored clothes; know how sorted, soaked, boiled, etc. (Modern washing machinery allowed.)
2. Do family ironing for total time of eight hours in two months.
3. Cover two ironing boards or one ironing table ready for use.
4. Use yellow and white soap, explaining different qualities of each. Use two other means besides soap for softening water.
5. Prepare and use, satisfactorily, hot and cold starch.
6. Use two methods of blueing, tell which is more successful and find out why.
7. Use one method for bleaching, also use Javelle Water and explain results.
8. Remove successfully such stains as coffee, tea, rust, and oil from the family washing.
9. Explain iron mould; what is the cure for it?
10. Explain blue mould; what is the cure for it?
11. Wash and launder a dozen dress ties.
12. Wash and launder six soft collars for men.
13. Wash and launder six sport shirts.
14. Wash and launder three negligée shirts with collars and cuffs attached.
15. Wash and launder a waist and skirt using starch suitable to material.
16. Wash and launder a fancy or lingerie dress.
17. Why do we hang white goods in the sun and colored goods in the shade?
18. Know how blankets should be washed and dried and also other woollens.
19. State how silk should be laundered and know why it should not be thoroughly dried.
20. State the advantage of dry cleaning and how is it done?
21. Remove four different kinds of spots from woolen and silk.
22. Press a skirt and coat and teach some one else to do so.
23. Press a man's suit four times, thoroughly cleaning before pressing.

**Life-Craft***(Midjim Binadisiwin)*

The Degree of Life-Craft may be conferred on any one who takes eight of these tests:

1. Know something practical of eugenics and how to combat a bad heredity.
2. Know about the care and feeding of infants from birth to three years.
3. Can detect the presence of enlarged tonsils and adenoids and be able to advise curative methods other than surgical.
4. Know the balanced diet for daily living that will result in good health.
5. Know the value of cereals and the proper preparation of corn, wheat, rice, barley, and rye for breads and porridges.
6. Be competent to take charge of child's recreation hours in all four seasons.
7. Know the local Board of Health and the state laws in regard to health and sanitation and how to cooperate.
8. Have made out a set of practical menus for three consecutive months in winter for a family of six; these menus must provide meals averaging not over ten cents per meal per person. This is at the rate of \$54 per month for all meats, dry groceries, milk and butter, fruits and vegetables. Service and overhead charges are not to be included. Menus must be accompanied with the daily order and approximate prices.
9. Know the salient points of tuberculosis as well as causes; also preventive measures for typhoid and malaria.
10. Know how to produce sweat, purge, vomiting, warmth; what will make a quick poultice to check diarrhoea, and also internal medicine for same.
11. State chief causes of each of the following diseases, tuberculosis, typhoid, malaria.
12. State how to plan the sanitary care of a camp.
13. State the reason why school children should undergo a medical examination.
14. Know how to care for sickroom, making patient comfortable and contented.

**Lightning Wheeler***(Odakewinini)*

The Degree of Lightning Wheeler may be conferred on any one who takes nine of these tests:

1. Ride a wheel fifty miles in ten hours.
2. Ride 100 miles in twenty-four hours.

3. Repair a puncture.
4. Take apart and clean a bicycle, and put it together again properly.
5. If sent scouting on a road know how to make reports on road conditions, hills, character of country, location and character of waters and settlements.
6. Read a map and report correctly verbal messages.
7. Write a full report of a 200-mile bicycle trip.
8. Ride a motorcycle.
9. Clean a motorcycle.
10. Repair any important part of a motorcycle.
11. Make a run of 100 miles in a day on motorcycle.
12. Make a run of twenty miles in one hour on motorcycle.

### Market Woman or Buyer

(Gishpinage)



The Degree of Market Woman may be conferred on any one who takes fifteen of these tests:

1. Explain the saying that Paris could live on the waste of New York City.
2. Know the seasons when lamb, mutton, and pork are best.
3. Know and buy the six choice cuts of beef, such as tenderloin, sirloin, porterhouse, round, rump, brisket, rib, etc. What parts of the animals are so called? Tell why certain cuts are best.
4. Know and buy the best mutton cuts, such as shoulder, leg, rack, chops, etc. Know which cuts are cheapest and best in the long run.
5. Know and buy the best pork cuts, such as shoulder, chops, loin, and rib roasts.
6. Know fresh brains, hearts, livers, kidneys, and sweetbreads.
7. Has the United States Pure Food Law given us better and safer meat? If so, why and how?
8. Know something definite about diseases of animals from which consumers are likely to suffer.
9. State why the knowledge of typhoid, tuberculosis, ptomaine, etc., is within the province of the market woman.
10. State whether the middleman is friend or foe of the market woman.
11. Explain cold storage; give list of foods that are safe.
12. Explain how parcels post, telephone, and cheap motor cars have been a help to the market woman.

13. Explain the revival of the farmers' markets; how does it affect the market woman?
14. Know the various fish, what kinds are best for frying, baking, broiling, etc.
15. Know the seasons for the various fish.
16. Know several salt or dried fish for winter use.
17. State what is the season for oysters.
18. Buy and use canned oysters; state if they are a success.
19. State what is the season for clams. State the various kinds.
20. Know and buy fresh crabs, soft and hard shelled, scallops, etc.
21. Know the seasons for the various fruits and vegetables in your locality and give reasonable price for each.
22. Make a list of the fruits and vegetables one would preserve, proving the economy of so doing.
23. Explain the truckman and push-cart business, its advantages and disadvantages.
24. State what fruits and vegetables can be bought in quantity and kept for future use.
25. Know edible mushrooms, when and how to buy them.
26. Know how to buy all staple goods at reasonable prices.
27. Know the lawful marks that guarantee pure food and full weight.
28. Do you know of and approve of the so-called "Economy" stores? If so, why?
29. Know if it is cheaper to buy or make bread, cakes, etc.
30. Cater for one week on \$2 per person, keeping exact accounts and records of expenses and menus.

### Metal Worker

(Nawabik)



The Degree of Metal Worker may be conferred on any one who takes seven of these tests:

1. Make a set of tracking irons.
2. Make four spears for the bear-spearing game.
3. Forge three links of a chain of three eighth inches stock.
4. Make a bolt of same stock.
5. Make a straight lap weld of same stock.
6. Make and temper a cold chisel.
7. Make and temper a rock drill.
8. Make a metal box by soldering the corners.

9. Make a box with riveted corners.
10. Make a ring, or fob, or other article of coin silver.
11. Make a key for a lock.

### Mountaineer

(Wadjiwed)



The Degree of Mountaineer may be conferred on any one who takes eight of these tests:

1. Take two honors at least in the list of mountain climbing.
2. Camp out at least thirty nights in the mountains.
3. Know, name, and describe the fourteen great divisions of the earth's crust (according to Geikie).
4. Know and name twenty-five different kinds of rock.
5. Define watershed, delta, drift, fault, glacier, terrace, stratum, dip.
6. Know at least twenty mammals that live in the mountains.
7. Know at least fifty mountain birds.
8. Know at least twenty-five mountain trees.
9. Make a journey alone on foot through the mountains of at least 100 miles, sleeping out every night.
10. Swim 100 yards.

### Needlewoman

(Jabonigan-Ikwe)



The Degree of Needlewoman may be conferred on any one who takes fifteen of these tests:

1. Make three different articles of plain white underwear.
2. Be able to run a sewing machine and keep it in condition for two months, using various parts for shirring, hemming, etc.
3. Make a plain waist or shirt waist for outing purposes.
4. Make a man's shirt.
5. Make a set of baby clothes, not less than six pieces, Gertrude patterns preferred.
6. Dress a doll in Woodcraft suit or some distinctive outfit, such as Colonial, Dutch, etc. Must be not less than ten inches high.
7. Darn stockings for three people for one month or its equivalent.
8. Make a satisfactory darn in tablecloth and napkin.



## Coups and Degrees

8.

9. Mend a three-cornered tear in cotton or woolen goods
10. Put in a neat patch.
11. Make twelve buttonholes of various sizes.
12. Make a sleeping bag for outdoor winter sleeping or a baby's traveling "cozy" bag.
13. Make a Council dress, worn or shown in Council.
14. Make a child's suit or dress.
15. Make a fancy dress, such as graduation, evening, or party dress.
16. Make artist's smock, garden smock, or child's smock dress in linen or silk.
17. Make a ceremonial cape with decorations for child or self. Must be shown in Council.
18. Make a suit of pajamas or bathrobe, either by machine or hand.
19. Decorate with appliqué design a ceremonial blanket; must be shown in Council.
20. Make a bedspread: appliqué or woven by hand.
21. Embroider or appliqué two pillowcases.
22. Embroider monogram on one dozen towels, or embroider a cross-stitch on the ends.
23. Make and insert six Irish crochet inserts in six towels.
24. Hem a tablecloth and a dozen napkins by hand.
25. Make six hemstitched handkerchiefs with monogram or crochet or tatting edge.
26. Design and work a monogram on six articles of household linen.
27. Embroider a shirtwaist, corset-cover, etc., with an original design.
28. Make a cloth, velvet, woolen, or fur tam-o'-shanter or cap, with other article to match, such as muffler, muff, collar, or belt.
29. Trim and line a hat, facing it or binding edge or putting on fold.
30. Make a hat of straw braid or a wire frame covered with lace, net, silk, etc.
31. Show samples of various kinds of stitches, such as hemming, running, over-casting, feather-stitching, slip stitching, whipping, gathering, tucking, etc.
32. Know six kinds of lace, hand or machine, and give an idea of the price.
33. Describe and give price of six kinds of cotton goods, distinguish by weave, ditto of silk, woolen or linen. Choice of two.

34. Describe satin and be able to show how it is woven to give it its sheen

### Nurse

(Gatini-Wekwe)



The Degree of Nurse may be conferred on any one who takes nine of these tests:

1. Take the American Red Cross First Aid.
2. Describe the daily routine for twenty-four hours in a sick room.
3. Give the symptoms of gripe, whooping cough, and pneumonia.
4. Give the symptoms of measles, scarlet fever, chicken and prickly heat.
5. Give the symptoms of tuberculosis, describe its action and the best means of combat.
6. Describe the action of bathing hot or cold, with the good possibilities and the risks.
7. Discuss massage as beneficial or harmful.
8. Discuss sunbath as beneficial or harmful.
9. Discuss fresh air as beneficial or harmful.
10. Discuss purges, showing the need and the best kind.
11. What would you do if your patient had a headache?
12. What medical outfit would you take for a month's sojourn in the wilderness?
13. State how to use a thermometer, and what should be the temperature and pulse of a normal child or a grown up.
14. Prepare three meals a day for an invalid, using chicken broth, eggs, milk, fruit, and show the value of bright cheerfulness.

Any doctor or trained nurse receives this degree upon proper licence.

### Patriotism

(Nind-aki)



The Degree of Patriotism may be conferred on any one who takes nine of these tests:

1. Recite "The Star-Spangled Banner."
2. Recite the first two paragraphs of the Declaration of Independence.

3. Recite the Preamble to the Constitution.
4. Recite Lincoln's Gettysburg Address.
5. Name the ten American men whom you consider the greatest in our history and say why.
6. Name the ten American women whom you consider the greatest in our history and say why. In this and in the preceding living persons are not to be included, and remember that all must be measured by what they accomplished.
7. Name the ten great turning points in our history and say why you consider them to be so.
8. Organize and take part in some pageant or other function celebrating some important local or national event or epoch.
9. Tell the history of the flag and the proper method to show respect to it.
10. Tell why we should conserve the forests and wild life.
11. Know the names, home places, and occupations of your grandparents and great-grandparents including the maiden names of the mothers in question.
12. Name the ten greatest heroes that your own race has given the world.
13. Have been responsible for a folk dance class of children.
14. Have been aided by public meetings and agitation to secure the passage of laws for the people's use of school buildings. New York, New Jersey, Washington, Wisconsin, Massachusetts, Kansas, Indiana, and the District of Columbia are in possession of a law that permits the people to use school buildings aside from school hours, for the purpose of meeting and discussing "any and all subjects and questions which in their judgment may appertain to the educational, political, economic, artistic, and moral interest of the citizens."
15. Have been responsible for marking (in artistic and appropriate way) some historic spot.
16. Have helped to establish a bird sanctuary.

### Potter

(*Nampeyo*, Famous Pueblo Indian Potter)



The Degree of Potter may be conferred on who takes ten of these tests:

1. Make bird's drinking fountain or basin or more inches across.
2. Make set of four bowls: decoration in Zuni style, Acoma and San Domingo styles.

3. Make jardinière at least ten inches across.
4. Make hanging vase to hold pint or more of water, Japanese design.
5. Make set of six plain cooking dishes of clay dug and prepared by self.
6. Make rectangular shallow dish for holding Japanese miniature garden 10 x 6 x 2 inches. Must be glazed to prevent leakage.
7. Make, dry, and bake eight little plain bowls all the same or of various shapes, hard enough to hold water, and without flaw that would prevent their being of practical use.
8. Make with coil process, dry and bake, four pots of Zuni shape with Zuni decorations, each large enough to hold two quarts, and close enough to hold water. without flaw that would prevent its practical use.
9. Make a potter's wheel and turn out eight pieces of pottery on the same. (See "Chamber's Encyclopedia.")
10. Make a potter's kiln and demonstrate it. (See "Chamber's" or "American Encyclopedia.")
11. Paint a set of eight china dishes using native American designs.
12. Paint a set of eight china dishes using any standard design.
13. Describe and fully distinguish six great types of Old World pottery.
14. Describe and fully distinguish four types of native American pottery.
15. Tell how the ancient and prehistoric pottery of America may be distinguished from that made to-day.
16. Make a set of candlesticks and firebowl for Four Fires.
17. Describe the principal varieties of native clays and tell what colors they bake; describe the Zuni method of firing.

### Scout

(Mikan)



The Degree of Scout may be conferred on any one who takes twelve of these tests:

1. Know every land bypath and short cut for a distance of at least two miles in every direction around your local headquarters in the country.
2. Have a general knowledge of the district within a five-mile radius of local headquarters, so as to be able to guide people at any time, by day or night.

3. Know the general direction and population of the five principal neighboring towns and be able to give strangers correct directions how to reach them.

4. Know the country in two-mile radius, or in a town must know in a half-mile radius what livery stables, garages, and blacksmiths there are.

5. Know the location of the nearest meat markets, bakeries, groceries, and drug stores.

6. Know where the nearest police station, hospital, doctor, fire alarm, fire hydrant, telegraph, and telephone offices, and railroad stations are.

7. Know something of the history of the place, its principal public buildings, such as town or city hall, post-office, schools, and churches.

8. As much as possible of the above information should be entered on a large scale map.

9. Fell a six-inch tree or pole in a prescribed direction so as to fall between two stakes two feet apart, within sixty seconds.

10. Tie six kinds of knots quickly.

11. Lash spars properly together for scaffolding.

12. Build a bridge or derrick.

13. Make a camp kitchen.

14. Build a shack or cabin of one kind or another suitable for three occupants.

15. Walk one mile in eleven minutes.

16. Run 100 yards in thirteen seconds.

17. Run fifty yards in seven and four fifth seconds.

18. Swim 100 yards.

### Scout Runner

(*Kee-mo-sah'-bee*)



The Degree of Scout Runner may be conferred on any one who takes nine of these tests:

1. Walk one mile in eleven minutes.

2. Walk thirty miles in twelve hours.

3. Run 100 yards in thirteen seconds.

4. Run fifty yards in seven and four fifth seconds.

5. Run one mile in five and one third minutes.

6. Swim 100 yards.

7. Paddle a canoe one mile in twelve minutes.

8. Know the Semaphore or Wigwag or Myer code and take as well as receive a message at the rate of at least twenty-four letters a minute.

9. Know 200 signs of the Sign Language.
10. Know the twenty-five secret signs and blazes of the Indian code.
11. Have slept out thirty nights.
12. Know and can clearly discriminate the track of twenty-five of our common wild quadrupeds; also trail for a mile without snow, till near enough to photograph or bag it.
13. Must have carried a letter three times over a mile of enemy's country with at least twenty hostiles out against him, of his own class.

### Seamanship

(*Nabikwa-Ninini*)



The Degree of Seaman may be conferred on any one who takes eighteen of these tests:

1. Tie ten different standard knots.
2. Make a finish knot at the end of a rope.
3. Make long and short splices and demonstrate covering an eye splice.
4. Use palm and needle.
5. Fling a rope coil.
6. Fling a life buoy.
7. Row and steer a boat.
8. Pole and scull a boat and demonstrate bringing it along-side safely, then make fast.
9. Box the compass.
10. Read a chart.
11. Show a knowledge of weather wisdom and tides.
12. Show how sun and stars are of service as guides.
13. Swim fifty yards with clothes on.
14. Sail a two-man boat for 100 miles without a professional sailor for companion, but yourself holding the tiller and directing its sail adjustment, etc. This need not be in one trip.
15. Demonstrate by description and sketch or actually demonstrate correct method of reefing a fore and aft sail including sequence of passing the tack lashing, setting and knotting reef points, and turning out the reef.
16. Describe the proper method of coming to anchor so as not to foul anchor; state proper amount of rope to be paid out in proportion to depth of water. Also show method of stopping anchor line down to flukes and ring to anchor on rocky bottom.
17. Rules of the road; proper action to be taken on approach of other vessel of any character.

18. Show that you have won first, second, or third place in a race of any of the recognized yacht clubs or associations, with yourself as skipper.

19. Make a model of a sloop or schooner yacht or other vessel fully rigged.

20. Tell the bells and watches kept on board ship.

21. Also usual flag signals for owner and crew, location of owner's and club signal and night pennant. Also proper method of displaying the yacht ensign when at anchor and under way.

22. Describe signal lights used at night on barges, sailing power and steam vessels according to United States Regulations. Also tell what lights are used by yachts showing fleet officers, meals, owner's absence, etc.

23. Name and describe ten different sailing rigs: ship, bark, barkentine, brig, brigantine, schooner, topsail schooner, sloop, yawl, ketch, knockabout, sharpie, buckeye, catboat, lateen rig.

### **Sharpshooter**

*(Gadaakwed)*



The Degree of Sharpshooter may be conferred on any one who takes seven of these tests:

1. Qualify as in "marksman" with the rifle in accordance with the regulations of the National Rifle Association.

2. Make a bow and arrow which will shoot a distance of 100 feet with fair precision.

3. Make a regulation archery target—four feet across, with the nine-inch centre and four rings, each four and three-quarter inches wide.

4. Make a total score of 350 with sixty shots of bow and arrow in one or two meets, using standard four-foot target at forty yards or three-foot target at thirty yards.

5. Make a total score of 300 with seventy-two arrows, using standard four-foot target at a distance of fifty yards, or three-foot target at thirty-six yards.

6. Shoot so far and fast as to have six arrows in the air at once.

7. See and map out six Pleiades.

8. See the Pappoose on the Squaw's back in the Dipper Handle.

9. Spot the rabbit three times in sixty yards.

## Small Stock Farmer

*(Manitoweish)*

The Degree of Small Stock Farmer may be conferred on any one who takes twelve of these tests:

1. Hatch and raise a brood of a dozen chickens till feathered.
2. Distinguish six leading breeds of hens, giving their good and bad points. State briefly Mendelian law as applied to chickens.
3. Describe one of the best incubators; show how it works, and say why it should replace the hen.
4. Describe the brooder. Have made a practical one.
5. Describe the most approved hen house and run.
6. Describe the dangerous diseases of hens.
7. Tell how to combat them. By foods, medicine, cleanliness, and good arrangement in housing, roosts, etc.
8. Describe the feeding and rearing of chicks, for food and for egg laying.
9. Also the killing and dressing for home and for market.
10. Pick, dress, and cook a fowl.
11. Be able to candle-test eggs, and crate them for market.
12. State advantage and disadvantage of keeping turkeys, ducks, and geese.
13. State what is known of the profits of poultry keeping from own experience.
14. State the advantage of squab raising.
15. Handle successfully, for one year, a hive of bees. Describe how it was done.
16. Give an outline of how to run a fur farm.
17. Take prize at National, State, or county fair for any of the following: chickens, geese, ducks, turkeys, guineas, squabs, bees, silkworms, or fur animals.

## Stock Farmer

*(Kiligwin)*

The Degree of Stock Farmer may be conferred on any one who takes eight of these tests:

1. Identify six different kinds of cattle and tell their good and bad points.
2. Know how to treat for caked bag.
3. Understand feeding for milk.



4. Milk a cow twice a day for one month.
5. Tell the effect of sunlight and good air on cows.
6. Understand the sterilization of milk.
7. Understand the care of dairy vessels, etc.
8. Test five cows for ten days each with the Babcock test and make exact reports.
9. Know how to treat a cow for indigestion.
10. Explain the use and advantage of a separator.
11. Make two pounds of butter a week for two months.
12. Explain pasteurizing and its value.
13. Keep a flock of sheep.
14. Raise at least four beeves for market or home consumption.
15. Raise hogs for market or home consumption.
16. Cure beef and pork for home use or for sale.
17. Know how to butcher beeves, hogs, and sheep.

### Star Wiseman

(Gijiged)



The Degree of Star Wiseman may be conferred on any one who takes seven of these tests:

1. Have a general knowledge of the nature and movements of the stars.
2. Point out and name ten principal constellations.
3. Find the north by means of other stars than the Pole Star in case of that star being obscured by clouds.
4. Tell the hour of the night by the stars and moon.
5. Know and name twenty of the chief stars.
6. Know, name, and can point out three of the planets.
7. Have a general knowledge of the positions and movements of the earth, sun, and moon.
8. Have a general knowledge of tides, eclipses, meteors, comets, sun-spots, and planets.
9. Take the latitude from the stars with homemade instruments, within one degree of error.
10. Make a sundial that works.

### Swimmer

(Shingebis)



The Degree of Swimmer may be conferred on any one who takes eight of these tests:

1. Swim 100 yards.
2. Swim on the back fifty feet.

3. Swim fifty feet with shoes and clothes on.
4. Demonstrate breast, crawl, and side stroke.
5. Dive properly from the surface of the water.
6. Dive into from seven to ten feet of water and bring from bottom to surface a loose bag of sand weighing five lbs.
7. Demonstrate on land five methods of release from a drowning person who clutches you.
8. Demonstrate in the water two methods of release.
9. Demonstrate the Schaefer method of resuscitation (prone pressure).
10. Demonstrate safely crossing thin or rotten ice.
11. Teach three persons to swim.

### Teacher

(*Kikinowina*)



The Degree of Teacher may be conferred on any one who takes seven of these tests:

1. Teach a class of children successfully for six months in school, church, or recreation centres.
2. Teach a class of children to sing, dance, or act for some patriotic, school, or charitable entertainment.
3. Teach a class of children in athletics for three months—dancing, swimming, riding, fencing, boxing, hiking, rowing, paddling.
4. Teach for a school year any child or children the rudiments of education, including outdoor and nature study.
5. Teach a sewing class of at least six for six months.
6. Teach six or more young people the Hopi Spring and Corn dance so that they can perform them at request.
7. Teach six or more children three folk dances.
8. Organize and lead a Band in Woodcraft for a year.
9. Lead an outdoor nature study class of four or more children for a year, so that class has collected twenty-five butterflies or moths, twenty-five wild flowers, ten ferns; knows fifteen trees by leaf and bark.
10. Have a class of four or more in popular astronomy for a winter or a summer, so that class can pass test for knowing Pole Star and fifteen star-groups.
11. Teach a handicraft class: beadwork, baskets, stencils, quillwork, metal work, pottery, woodcarving, etc.
12. Teach two or more children to sing without accompaniment any three ballads (solos or duets) of known merit, such as folk songs or standard songs.

13. Teach a cooking class for six months and give a demonstration of its success.
14. Teach a class in manual training for six months.
15. Bring group of children trained by self to entertain Council by dancing, singing, talk-fest, or acting.

### Three Years' Service

(Nisso-bibon)



The Degree of Three Years' Service may be conferred on any one who has been a member of a Woodcraft Tribe for three years, never missing a tribal campout in that time, attending half of the tribal meetings at other times, and having a clear record for law and order.

### Thunder Handler

(Wassamowin)



The Degree of Thunder Handler may be conferred on any one who takes twelve of these tests:

1. Explain the difference between direct and alternating current.
2. Install a bell battery.
3. Install a telephone.
4. Install an electric light.
5. Explain Ampere.
6. Explain Kilowatt.
7. Explain Volt.
8. Repair a broken switch.
9. Splice and insulate a broken wire.
10. Replace a fuse.
11. Show how to rescue a person in contact with a live wire.
12. Show how to resuscitate a person.
13. Make a simple electro-magnet.
14. Explain the construction of a simple battery cell.
15. Explain a storage battery.
16. Explain a short circuit.
17. Explain a ground wire.
18. Show the sign now used for live wire (a lightning zigzag)

## Thunder Roller

(Animiki-okakewinini)



The Degree of Thunder Roller may be conferred on any one who takes nine of these tests:

1. Show that you can start a motor, explaining what precautions should be taken.
2. Take off and put on pneumatic tires.
3. State the construction and purpose of clutch.
4. State the construction and purpose of carburetor.
5. State the construction and purpose of valves.
6. State the construction and purpose of magneto.
7. State the construction and purpose of spark plug.
8. State the construction and purpose of differential.
9. State the construction and purpose of transmitter.
10. State how to put out burning gasoline or oil.
11. State how to run two different types of cars.
12. Pass an examination equal to the local license examination for chauffeur.

## Traveler

(Bebamadisid)



The Degree of Traveler may be conferred on any one who takes eleven of these tests:

1. Walk one mile in eleven minutes.
2. Tramp thirty miles a day.
3. Climb one of the standard peaks. (See mountain climbing.)
4. Know at least fifteen star groups, including the Dipper and the Little Bear.
5. Camp out in at least ten different states or countries.
6. Enter the Arctic or Antarctic circles.
7. Cross the equator.
8. Take exact latitude and longitude with instruments.
9. Take latitude within two degrees of error, with home-made instruments.
10. Make a compass survey of 100 miles of country.
11. Travel at least 100,000 miles by rail or steamship or other means.
12. Travel 500 miles on foot, by bicycle, by canoe, or in saddle, camping out.
13. Know 200 signs of the Sign Language.
14. Make one's self comfortable in the woods with only wild-wood material.
15. Swim 100 yards.
16. Sleep out thirty nights.

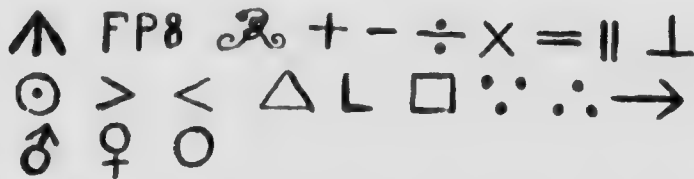
## Village Scout

(Odena-winini)



The Degree of Village Scout may be conferred on any one who takes fourteen of these tests:

1. Know how to turn in an alarm for fire.
2. Know how to enter burning buildings.
3. Know how to prevent the spread of fire.
4. Understand the use of hose: unrolling, joining up, connecting two hydrants, use of nozzles, etc.
5. Understand the use of escapes, ladders, and chutes.
6. Know how to improvise ropes and nets.
7. Know what to do in case of panic.
8. Understand the fireman's lift and drag.
9. Know how to work in fumes.
10. Understand the use of fire-extinguishers.
11. Know how to rescue animals.
12. Know how to save property.
13. Know how to organize a bucket brigade.
14. Know how to aid the police in keeping back crowds.
15. Know how to ride a wheel.
16. Repair a puncture.
17. Walk four miles in one hour.
18. Know the signs:



Meaning respectively:

Official mark, fire-plug 8 feet out, please remove dust, add, subtract, divide, multiply, equals, parallel, plumb, circle, more than, less than triangle, right-angle, square, because, therefore, this direction, male, female, young.

## White Man's Woodcraft

(Dibaakid)



The Degree of White Man's Woodcraft may be conferred on any one who takes nine of the following tests:

1. Take, develop, and print photographs of

twelve separate subjects, three interiors, three portraits, three landscapes, and three instantaneous "action photos."

2. Make a recognizable photograph of any wild bird larger than a robin, while on its nest.
3. Make a recognizable photograph of a wild animal in its native haunts.
4. Make a recognizable photograph of a fish in the water.
5. Map correctly from the country itself the main features of half a mile of road, with 440 yards each side, to a scale of two feet to the mile, and afterward draw same map from memory.
6. Measure the height of a tree, telegraph pole, and church steeple without climbing.
7. Measure width of a river without crossing.
8. Estimate distance apart of two objects a known distance away and unapproachable, within an average of 10 per cent. of error in ten different trials.
9. Measure a gradient.
10. Estimate the speed of a stream.
11. Tell the number of gallons of water going over a fall or down a stream.
12. Estimate the horsepower of a given fall.
13. Teach the last seven to some one else.

### Wise Woodman

(Nikwaka-winini)



The Degree of Wise Woodman may be conferred on any one who takes twelve of these tests:

1. Have a list of 100 different kinds of birds personally observed on exploration in the field.
2. Have identified beyond question, by appearance or by note, forty-five different kinds of birds in one day.
3. Have made a good clear photograph of some wild bird, the bird image to be over half an inch in length on the negative.
4. Have secured at least two tenants in bird boxes erected by himself.
5. Have daily notes on the nesting of a pair of wild birds from the time the first egg is laid until the young have left the nest.
6. Have attracted at least three kinds of birds, exclusive of the English sparrow, to a "lunch counter" which he has supplied.

7. Have a knowledge of the game laws of the state in which he lives.
8. Preserve and mount the skin of a game bird, or animal, killed in season.
9. Mount for a rug the pelt of some fur animal.
10. Know twenty-five different kinds of trees.
11. Know thirty different wild flowers.
12. Know ten different snakes.
13. Know ten different fungi.
14. Know the signs of weather.
15. Make fire with the rubbing-sticks.

### Woman's Power in History

(*Gashkiewikwe'*)



The Degree of Woman's Power in History may be conferred on any one who takes nine of these tests:

1. Name five great women rulers of the world, give their history, and tell something about them.
2. Name five great American women who have made history (the living included).
3. Name five great women scientists and state their claims to fame.
4. Name five great women inventors and state their claims to fame.
5. Name five great women educators and state their claims to fame.
6. Name five great women artists and state their claims to fame.
7. What was the real status of woman among the American Indians? (See "Book of Woodcraft.")
8. Name five great American Indian queens who achieved power by their personal force.
9. What countries now have Woman Suffrage?
10. What states in America have Woman Suffrage?
11. Write an essay of 1,500 to 3,000 words stating what you know of the Woman's Rights Movement, also your opinion as to the ultimate destiny and effect.
12. What recent changes have been made by law in your state to equalize the advantages and opportunities of men and women.
13. Explain community property law as affecting husband, wife, and children. What states have this law? Where was its origin?

14. Tell what races traced descent from the mother—point out the traces of this in Greece—Sparta. Modern examples Pueblo Indians.

15. Explain difference and likeness between a feminist and a suffragist.

16. State whether mother is legally "next of kin" to her children in your state.



# INDEX

	PAGE		PAGE
<i>Abies balsamea</i>	288	<i>Awema</i> degree, tests for	378
<i>Acer Negundo</i>	310	Axe, use of the	322
<i>Acer rubrum</i>	310	Axe work, coups for	357
<i>Acer saccharinum</i>	309	<i>Azalea nudiflora</i>	273
<i>Acer saccharum</i>	308	<i>Azalea</i> , Pink	273
<i>Achillea millefolium</i>	273		
Activities in Tribe and Council	37		
Adamson, Fire Commissioner, on fire prevention	133	Backwoods Handicraftsman degree, tests for	376
Aerial switch for wireless	129	Badge, Minisino	19, 23
Aerial wire system	123	Badge, Pathfinder	18, 23
Agriculture, coups for	365	Badge, Wayseeker	18, 23
Ague Tree, or Sassafras	306	Badges, claiming and conferring of	32
<i>Aix sponsa</i>	327	Badges, Degree, illustrated	370-373
Alligator Tree, Bilsted, or Liquidambar	306	Badges, designs and colors	21
"Alouette," words and music	70	Badges for coups	346
Alphabet of sign language	154	Badges, illustrated	18, 19, 23
<i>Amanitas</i> , poisonous toadstools	194, 195	Badges, meaning of the	22
"America"	65	Badges of rank, purchase of	7
American Hornbeam, Blue Beech, or Water Beech	298	Bait casting, coups for	361
<i>Anas platyrhynchos</i>	327	Bald Cypress	289
<i>Anemone Canadensis</i>	273	Bald, or White-headed, Eagle	323
<i>Anemone</i> , Pennsylvania or Canada	273	Balloting on candidates for membership	31
<i>Anemone quinquefolia</i>	273	Balm of Gilead, Balsam Poplar, or Tacamahac	291
<i>Anemone</i> , Rue	273	Balsam Poplar, Balm of Gilead, or Tacamahac	291
Animal Dance of Nana-bo-jon, the	87	Balsam Tree, or Canada Balsam	288
Animal tracks, recording	204	Baltimore Oriole	332
Animals, the study of	266	Band, definition of	21
<i>Animibi-ohakewinini</i> degree, tests for	424	Band meetings, when held	7
<i>Anishnabe</i> degree, tests for	406	Band, organization	30
<i>Anokwin</i> degree, tests for	378	Bands, formation of	5
Apache Relay Run	47	Bannocks, to bake	183
<i>Aquila chrysaetos</i>	323	Barn Swallow	335
<i>Aquilegia Canadensis</i>	270	Barred, or Hoot, Owl	323
Arbor-vitæ, or White Cedar	289	Baskets, birch bark	246
Arbutus, Trailing	270	Basswood browse, or buds, for food	191
Archery	241	Basswood, Whitewood, Whistle-wood, Lime, or Linden	311
Archery, course for	359	Bat Ball Game	47
Arctic travel, coups for	354	Bathing, coups for	353
<i>Ardea herodias</i>	329	Battery for wireless set	125
<i>Arisaema triphyllum</i>	278	Beauty's Lamp, rays from	25
Arrowleaf, or Sagittaria, as food plant	102	<i>Bebamadisid</i> degree, tests for	424
Arrows, to make and use	242	<i>Bebamomigod</i> degree, tests for	400
Art Craftsman, degree test for	374	Bed, Woodcraft willow	232
Art Metal Worker degree, tests for	376	Beds, camp, how made	170
Artificial respiration, to administer	142	Bedstraw, or Stickweed	273
<i>Asarum Canadense</i>	278	Bee Balm, or Oswego Tea	277
<i>Asclepias purpurascens</i>	278	Beech	302
Ash, Black	313	Beech, Blue or Water, or American Hornbeam	298
Ash, White	312	Bee-line travel, coups for	356
Ash-leaved Maple, or Box Elder	310	Beetlewood, Ironwood, Hard-back, Leverwood, or Hop Hornbeam	297
<i>Ashangekite</i> degree, tests for	401	Benefits and dangers of camping out	160
Aspen-leaved, or Gray, Birch	296	<i>Betula lutea</i>	297
Aspen Poplar, Quiver Leaf, Quaking Asp, or Popple	289	<i>Betula papyrifera</i>	296
<i>Atassowin</i> degree, tests for	383	<i>Betula populifolia</i>	296
Athlete, or Strongman degree, tests for	375		
Athletics, coups for	347		

	PAGE		PAGE
<i>Bibaged</i> degree, tests for	398	Broom, camp	229
Big and Little Lodges	xv	Brother and Sister Craft degree, tests for	378
Big-bud, White-heart, or Mockernut,		<i>Bubo Virginianus</i>	324
Hickory	294	Bull-boat, as teepee storm cap	230
Big Dipper, or Great Bear	314	Burns and scalds, treatment for	143
Big Lodge badge, design and color	22	Burning building, life saving in a	135
Big White Trillium	270	Business degree, tests for	378
Bilsted, Alligator Tree, or Liquidambar	306	<i>Buteo borealis</i>	323
<i>Bineshi</i> degree, tests for	377	Buttons, leather, to make	245
Birch, Gray, or Aspen-leaved	296	Buttonwood, Buttonball, Plane Tree,	
Birch, White, Canoe, or Paper	296	or Sycamore	306
Birch, Yellow, or Gray	297	Butternut, Oil Nut, or White Walnut	293
Birch bark articles, to make	246	Buzzard, or Turkey Vulture	324
Birch canoe making, coup for	358		
Bird box, sparrow-proof	251	Cabin building, coups for	358
Bird boxes, to make	240	Cakes, baked on flat stone	186
Bird sanctuaries on city roofs	164	Calling the roll in Council meetings	8
Bird Sharp degree, tests for	377	Calopogon, as food plant	192
Bird's-eye and curled maple	300	Camp beds, how made	179
Bird's foot Violet	268	Camp bread, to make	183
Birds that every Woodcrafter should		Camp broom	229
know	323	Camp Cook degree, tests for	380
Birds, the study of	266	Camp cookery	183
Biscuit, to bake	183	Camp craftsman degree, tests for	381
Bittern	323	Camp Doctor degree, tests for	381
Black, Hoop, or Water, Ash	343	Campfire, rules for the	281
Black or Sour Gum, Pepperidge, or		Campfire Stories and Poems	95
Tupelo	312	How Men Found the Great Spirit	114
Black, or Golden Oak, or Quercitron	321	The Fairy Lamps	95
Black flies, mosquitoes, etc.	181	The First Gang	100
Black Walnut	291	The Gitch-e O-kok-o-hoo	98
Black Willow	280	The Origin of the Bluebird	97
Black-eyed Susan	271	The Road to Fairyland	95
Blackbird, or Purple Grackle	333	The Seven Swans	108
Blazes and signs	253, 256	The Story of Corn-Smut Girl	99
Blaze and sign making, coups for	350	The Twin Stars	98
Blazing Lamp of Love, rays from the	26	Camp grate, how made	182
Blind Man's Buff Game	57	Camp grounds, selecting	173
Bloodroot	270	Camp horn, the	186
Blue Beech, Water Beech, or American		Camp inspection	176
Hornbeam	298	Camp kitchen	183
Blue Vervain, or Wild Hyssop	268	Camp lantern, the best	218
Blue-eyed Grass, Blue Star, or Star		Camp leadership	174
Grass	268	Camp loom and grass mats	226
Bluebell, or Harebell	258	Camp officers, election of	175
Bluebird	337	Camp program	175
Bluejay	334	Camp rake	228
Boat building, coups for	358	Camp rules	176
Bobolink, or Reedbird	332	Camp, running a	173
Bobwhite, or Quail	329	Camp sanitation	174
Bodarc, Bow-wood, or Osage Orange	305	Camp team work	174
Bog potato, as food plant	192	<i>Campanula rotundifolia</i>	268
<i>Bomasa umbellus</i>	329	Campier degree, tests for	370
Boneset	270	Campiercraft, coups for	356-362
Bonfires, always dangerous	133, 178, 281	Camping, arrangement of tents, etc.	173
Botany, the study of	205	Camping, coups for	358
<i>Botaurus lentiginosus</i>	328	Camping on city roofs	163
Bow and arrow making, coups for	350	Camping out, benefits and dangers	190
Bow and arrows, to make and use	241	Camping, rip, outfitting for	170
Bow and drill for firemaking	240	Canada Balsam	288
Bow-wood, Bodarc, or Osage Orange	305	Canadian, Red, or Norway Pine	285
Box Elder, or Ash-leaved Maple	310	Canis Major, constellation of	317
Boxes or houses for birds, to make	249	Canis Minor, constellation of	317
Braiding and splicing, coups for	357	Canner degree, tests for	383
<i>Brunia Canadensis</i>	323	Canoe Tag	57
Bread, camp, to make	184	Canoe, White, or Paper Birch	296
Bread, to make without utensils	185	Canoe-camping, coups for	354
Bread root, or Prairie Turnip, as food		Canoe-wood, White-wood, Yellow Pop-	
plant	194	lar, or Tulip Tree	305
Breathing, healthful	141	Canoeing, coups for	354
Brennus, the Gaul	3	"Canoeist's Love Song," words and	
Broiling fish or game	185	music	71

PAGE		PAGE		PAGE
220	Canoeman Degree, tests for	383	Cook, camp, appointment and duties	174
378	Cardinal Flower	276	Cook's Assistant in camp, duties of	175
324	Caribou Dance, the	85	Cookery, camp	183
230	Carpenter degree, tests for	384	Cooking, coups for	358
143	<i>Carpinus Caroliniana</i>	308	Cooking outfit for camping trip	170
135	Carion Crow	320	Cooking without utensils	184
378	Carving a fork and spoon	246	Copperhead Snake	338
323	Cassiopeia, constellation of	317	Coral Snakes	338
245	<i>Castanea dentata</i>	303	Corn-Smut Girl, the Story of	90
306	<i>Castilleja coccinea</i>	276	<i>Corvus brachyrhynchos</i>	332
293	Cat, or Great Horned, Owl	324	Cotton-mouth Moccasin	338
324	Cat, tracks of	306	Cottonwood	281
	Catbird	335	Council, closing the	9, 26
	<i>Calharies aura</i>	324	Council, decorum of	9
358	Cedar, White, or Arbor-vita	280	Council Fire, how made	178
186	Celandine	273	Council Fire, indoor	9
8	<i>Cercis Canadensis</i>	308	Council Fire, lighting the	8
102	Ceremony of Grand Council	25	Council Fire, position of	177
170	<i>Chabakwed</i> degree, tests for	380	Council Fire, wood supply for	175
183	<i>Chamaenerion angustifolium</i>	278	Council-fire Circle, establishing a	177
220	Charlemagne, trained in woodcraft	3	Council games	43
380	Charter, cost of and how obtained	7	Council meetings, when and where held	7
183	Charter, how to apply for	5	Council, National, officers of	ix
381	<i>Chelidonium majus</i>	273	Council of Guidance, officers of	ix
381	Chemauwigan degree, tests for	383	Council, order of doings in	8
281	Chestnut	303	Council Ring, how to make	177
95	Chestnut, Yellow, or Chinquapin Scrub Oak	290	Council Ring making, coups for	359
114	Chickadee	336	Council Ring, meaning of the	24
95	Chicken-squawk, to make	246	Council Robe, how made	26
100	Chicory, or Succory	268	Council room, arrangement of	7
98	Chief, qualifications and duties	20, 28	Councils, High, General, and Grand	177
97	Chief, selection of	5	Councils, Special, how called	27
95	Chief's badge, design and color	21	Councils, when held	27
108	<i>Chimaphila maculata</i>	278	Coup and Degree badges, conferring of	2
90	Chinese Tag Game	47	Coup badge, design and color	22
98	Chinquapin Scrub Oak, or Yellow or Chestnut Oak	290	Coups, badges for	346
182	Chips, horse and cow, for fires	183	Coups for Agriculture	365
173	<i>Chrysanthemum Leucanthemum</i>	270	Coups for Athletic Exploits	345-356
186	<i>Cichorium Intybus</i>	268	Arctic travel	354
176	Cinder or sand in the eye, treatment for	144	Athletic Specialties	353
183	Citizen degree, tests for	385	Bathing	353
218	Citizenship and patriotism	145	Canoe camping	354
174	City craft	122	Canoeing	354
226	City hunting, coups for	358	Eyesight	356
175	City woodcraft	121	Gang tramping	354
228	Claiming degrees	373	General athletics	347-352
176	Claiming of badges	38	Horseback riding	347
173	<i>Claytonia Virginica</i>	271	Life saving	346
174	Cleavers, or Stickweed	273	Log riding	354
174	"Closing Lullaby," words and music	73	Lone tramping	354
268	Closing the Council	9, 26	Motoring	354
370	Cock-Fighting Game	45	Mountain climbing	355
356-362	Code, International Morse	127	Paddling	354
173	Code for smoke signals	256	Saddle camping	354
358	Code, railway signal	161	Skiing	354
163	<i>Colaptes auratus</i>	330	Target shooting	356
100	<i>Colinus Virginianus</i>	320	Tropic travel	354
170	Colonial Housekeeper degree, tests for	386	Coups for Campercraft	350-362
284	Colors, Indian, how obtained	243	Archery	350
285	Columbine	276	Axe work	357
317	Compass, home-made	218	Bait casting	361
383	Compass, the watch as a	218	Bee-line travel	356
57	Condenser for wireless	126, 128	Birch canoe making	358
290	Cone-flower, or Black-eyed Susan	274	Blaze and sign making	359
354	Conferring Coup and Degree badges	38	Boat building	358
	Connecting up wireless set	120	Bow and arrow making	359
305	Conservator degree, tests for	387	Braiding and splicing	357
354	Constitution, changes in the	29	Cabin building	358
	Constitution or Laws for the ruling of the Tribe	27	Camping	358
73			City hunting	358
			Cooking	358
			Council Ring making	359

	PAGE		PAGE
Dancing	199	Degrees, tests for	374-427
Diamond Hitch throwing	357	Art Craftsman	374
Flint-and-steel fire making	357	Art Metal Worker	376
Fly casting, indoor	361	Athlete, or Strongman	375
Fly fishing	361	Backwoods Handicraftsman	376
Gauging farness	357	Bird Sharp	377
Guessing size, height, and weight	357	Brother or Sister Craft	378
Herald, proficiency as	359	Business	378
Knot tying	357	Camper	379
Lassoing	357	Camp Cook	380
Latitude taking	358	Camp Craftsman	381
Latrine making	358	Camp Doctor	381
Map making	359	Canner	383
Match-fire proficiency	356	Canoeman	383
Peace Messenger, proficiency as	359	Carpenter	384
Rod making	361	Citizen	385
Rubbing-stick fire lighting	357	Colonial Housekeeper	386
Sign talking	358	Conservator	387
Signaling, Wigwag, Myer or Morse codes	358	Cradle Craft	388
Star gazing	357	Dancer	389
Sweat Lodge making	359	Entertainer	390
Tackle making	360	Farmer	391
Tent or teepee making	358	Fisherman	392
Tomtom making	359	Food Craft	393
Trailing	358	Forester	394
Traveling	358	Frontiersman	395
Water boiling	357	Gardener	396
Wilderness cooking	358	Gleeman, or Camp Conjuror	397
Coups for Curing meat and fish	367	Handihelp	397
Coups for Drying, Preserving, and Canning	367	Herald, or Crier	398
Coups for Entertaining	368	Home Cook	399
Coups for Geology, etc	363	Horseman	400
Coups for Handicraft work	364	Hostess	401
Coups for Home Craft	366	Housekeeper	402
Coups for Life Craft	369	Hunter	404
Coups for Nature Study	362	Hunter in Town	405
Coups for Needle Craft	368	Indian Craftsman	405
Coups for Photography	364	Indian Lore	406
Cradle Craft degree, tests for	388	Laundry Expert	408
Crane's Bill, or Wild Geranium	278	Life-Craft	409
Crinkle-root, as food plant	194	Lightning Wheeler	400
Crow Blackbird, or Purple Grackle	343	Ma, ket Woman, or Buyer	410
Crow, Carrion	326	Metal Worker	411
Crow, Common	332	Mountaineer	412
Curing meat and fish, coups for	367	Needlewoman	414
Cuts and wounds, treatment	143	Nurse	414
<i>Cyanocitta cristata</i>	131	Patriotism	415
Cypress, Bald	289	Potter	416
<i>Cypripedium acaule</i>	271	Scout	417
<i>Cypripedium hirsutum</i>	274	Scout Runner	418
<i>Cypripedium reginae</i>	271	Seamanship	419
Dancer degree, tests for	389	Sharpshooter	421
Dancing	79	Star Wiseman	421
Ojibway Snake Dance	84	Small Stock Farmer	420
The Animal Dance of Nana-bo-jou	87	Stock Farmer	420
The Caribou Dance	85	Swimmer	421
The Dog Dance	84	Teacher	422
The Lone Hunter	81	Three Years' Service	423
The Storm Cloud	80	Thunder Handler	423
Dancing, coups for	150	Thunder Roller	424
Dancing, Indian	79	Traveler	424
Dasswabe degree, tests for	376	Village Scout	425
<i>Daucus carota</i>	274	White Man's Woodcraft	425
"Death Song" (Ojibway), words and music	74	Wise Woodman	426
Decorum of Council	9	Woman's Power in History	427
Deer Hunt Game	32	Degrees, claiming of	373
Degree badges, design and color	22	Degrees in Woodcraft, list of	370
Degree badges, illustrated	370-374	Diamond Hitch throwing, coups for	357
		<i>Dyabakid</i> degree, tests for	425
		Disputes, how settled	28
		Distance across stream, to measure	198
		Ditty-box, to make	216

## PAGE

4-437	Dog, to determine weight by size of track	108
374	Dog, tracks of	206
376	Dog Dance, the	83
375	Doing, the value of	216
376	<i>Dolichonyx oryzivorus</i>	332
377	Don't turn out your toes	141
378	Don'ts for fire prevention	133
379	Dope, fly and mosquito	181
380	Dove	330
381	Downy Woodpecker	330
381	Drill and bow for fire making	230
383	Drowning, to revive from	142
383	Drum, how to make	212
384	Dry footgear, necessity of	142
385	Dry wood, to obtain	182
386	Drying, Preserving, and Canning, coups for	367
387	<i>Dryobates pubescens</i>	330
388	Ducks, Wild	327
389	Dues, membership	5
390	Dues and assessments	29, 30
391	<i>Dumetella Carolinensis</i>	335
392	Duties of the rulers of the tribe	28
393	Dyes, woodcraft	245
394	Eagle, Bald, or White-headed	343
395	Eagle, War, or Golden	343
396	Edible wild plants	191
397	Election of camp officers	175
398	Election of officers of Tribe	5
399	Election of officers at annual meeting	27, 28
400	Elm, Slippery, to prepare for food	191
401	Elm, Slippery, Red, or Moose	303
402	Elm, Swamp, Water, or White	303
403	Entertainer degree, tests for	300
404	Entertaining, coups for	368
405	Eskid degree, tests for	381
406	<i>Epigaea repens</i>	270
407	Epilobium, or Fire Weed	278
408	<i>Eupatorium perfoliatum</i>	270
409	Exploits, Coup badges for	345
410	Eye, cinder or sand in the	144
411	Eyes, defects and remedy	141
412	Eyesight, coups for	356
413	<i>Fagus grandifolia</i>	302
414	Fainting, treatment for	144
415	Fairy Lamp, the	85
416	False Solomon's Seal	273
417	Fangs of poisonous snakes	340
418	Farmer degree, tests for	391
419	Farness, gauging, coup for	357
420	Far Sight, or Spot the Rabbit Game	40
421	Father Councillor, qualifications for	21
422	Feather Football, or Feather-blow Game	62
423	Fire Keeper, duties of	21
424	Fire kindler, to make	182, 221
425	Fire, loss of life and property by	133
426	Fire Pink	270
427	Fire, prevention of	134
428	Fire, to keep all night	183
429	Fire Weed, Epilobium, or Spiked Willow herb	278
430	Fire, what to do in case of	134
431	Fire with rubbing-sticks	210
432	Fireside Trick	61
433	First Aid:	
434	Burns and scalds	143
435	Cinder, or sand, in the eye	144
436	Cuts and wounds	141

Drowning, to revive from	142
Fainting	144
Hemorrhage, or internal bleeding	143
Insect stings	144
Lightning stroke	144
Mad dog or snake bite	144
Shock, or nervous collapse	144
Snake bite, treatment for	340
Sunstroke	143
First Gang, the	100
Fish, cooked without utensils	181
Fish and game, baked in mud	186
Fisherman degree, tests for	302
Fishing, coups for	360
Flag and lamp signals, railway	101
Flicker, or Highhole	340
Flint-and-steel fire making, coups for	357
Fly and mosquito dope	181
Fly casting, indoor, coups for	361
Fly fishing, coups for	361
Folk dancing	70
Food Craft degree, tests for	303
Food supplies for camping trip	170
Forest fires, destruction by	230
Forester degree, tests for	304
Fork and spoon, to carve	246
Fortune Game	58
Forty birds that every Woodcrafter should know	323
Fourth of July celebration, loss of life at	133
Fox, tracks of	208
Fox's hunt, the	211
<i>Fraxinus Americana</i>	312
<i>Fraxinus nigra</i>	313
Fringed Gentian	270
Frontiersman degree, tests for	305
Fungi, Mushrooms, or Toadstools	104
<i>Gabeshiked</i> degree, tests for	370
<i>Gadaakwed</i> degree, tests for	410
<i>Gagoiked</i> degree, tests for	392
<i>Galal</i> degree, tests for	386
<i>Galium mollugo</i>	273
Game and fish baked in mud	186
Games, Council	43
Cock Fighting	45
Indian Leg Wrestle	44
Navajo Feather Dance	44
One-legged Chicken Fight	45
Poison	45
Solemnity	16
Strong Hand	45
Stung, or Step on the Rattler	45
Talk-fest	40
Tub Tilting	43
Games Indoor	
Blind Man's Buff	
Feather Football, or Feather blow	
Fireside Trick	61
Fortune	
Geography	
Guessing Game	
Kingdom	60
Lone Star Trick	61
Magic Music	60
Menagerie	60
Menagerie Part	
My Vacation	
Names by Topic	
Odds and Evens	
Portrait Party	

	PAGE		PAGE
Games, Outdoor . . . . .	46	Group work in camp . . . . .	175
Apache Relay Race . . . . .	47	Grouse, Ruffed . . . . .	321
Bat Ball . . . . .	47	Grouse, snow shelter of . . . . .	212
Chinese Tag . . . . .	47	Growth in Woodcraft . . . . .	11
Far Sight, or Spot the Rabbit . . . . .	49	Guessing Game . . . . .	59
Home Star, or Pole Star . . . . .	49	Guessing size, height, and weight, coups for . . . . .	357
Hostile Spy . . . . .	49	Guide, qualifications and duties . . . . .	20, 28
Medley Scouting . . . . .	51	Guide, selecting a . . . . .	5
Quick Sight . . . . .	48	Gum, Red, Star-leaved or Sweet . . . . .	306
Rat on the Lodge . . . . .	50	Gum, Sour, or Black . . . . .	312
Scouting . . . . .	47		
Still-hunting the Buck, or the Deer Hunt . . . . .	52	Hackmatack, Tamarack, or Larch . . . . .	287
Trailing . . . . .	49	<i>Haiaetus leucocephalus</i> . . . . .	323
Tree the Coon . . . . .	50	Hand, flag, and lamp railway signals . . . . .	161, 162
Watching by the Trail . . . . .	49	Handicraft stunts . . . . .	246
Water-boiling Contest . . . . .	51	Handicraft Work, coups for . . . . .	364
Games, Water . . . . .	55	Handihelp degree, tests for . . . . .	397
Canoe Tag . . . . .	57	Hard, Long-leaved, Georgia, Southern, Yellow, or Hard Pine . . . . .	285
Spearing the Great Sturgeon . . . . .	55	Hard, Rock, or Sugar, Maple . . . . .	308
Tilting in the Water . . . . .	57	Hard-hock, Ironwood, Leverwood, Beetlewood, or Hop Hornbeam . . . . .	297
<i>Ganawenima</i> degree, tests for . . . . .	58	Hardtack, to bake . . . . .	181
Gang tramping, coups for . . . . .	124	Harebell, or Bluebell . . . . .	268
Gaussed degree, tests for . . . . .	124	Harmless snakes, value to the farmer . . . . .	340
Garbage disposal in camp . . . . .	124	Hatchet, use of . . . . .	221
Gardener degree, tests for . . . . .	124	Head Guide, duty of . . . . .	28
<i>Gashkewikue</i> degree, tests for . . . . .	124	Head nets for flies and mosquitoes . . . . .	181
<i>Gatini-Wekue</i> degree, tests for . . . . .	124	Head or hat band, design and color . . . . .	22
Gauging fairness, coups for . . . . .	124	Health Chief for camp, duties of . . . . .	174
<i>Gavia immer</i> . . . . .	126	Health hints . . . . .	130
Gee-string camp, the . . . . .	180	Heartsease, or Violet . . . . .	268
General Council, how held . . . . .	177	Height of trees, to determine . . . . .	198
Gentian, Fringed . . . . .	270	Height, size, and weight gue-sing, coups for . . . . .	357
<i>Gentiana crinita</i> . . . . .	270	Hemlock . . . . .	287
Geography Game . . . . .	59	Hemorrhage, or internal bleeding, treatment for . . . . .	143
Geology, coups for . . . . .	63	Henhawk, or Red-tailed Hawk . . . . .	323
Georgia, Southern, Yellow, Hard, or Long-leaved Pine . . . . .	285	Hepatica, or Liverleaf . . . . .	268
<i>Geranium maculatum</i> . . . . .	278	<i>Hepatica triloba</i> . . . . .	268
Geranium, Wild . . . . .	278	Herald, or Crier degree, tests for . . . . .	398
<i>Gijiged</i> degree, tests for . . . . .	427	Herald, coups for proficiency as . . . . .	350
<i>Gimah</i> degree, tests for . . . . .	395	Heron, Great Blue . . . . .	320
Ginger, Wild . . . . .	278	Hickory, Pignut . . . . .	295
<i>Gishpinage</i> degree, tests for . . . . .	110	Hickory, White, Shellbark, or Shagbark . . . . .	294
Gitch-e-O-kok-o-hoo the . . . . .	98	Hickory, White-heart, Big-bud, or Mockernut . . . . .	294
Gileman, or Camp Counurer degree, tests for . . . . .	397	<i>Hicoria alba</i> . . . . .	294
Golden, or Black Oak, or Quercitron . . . . .	121	<i>Hicoria glabra</i> . . . . .	295
Golden, or War, Eagle . . . . .	121	<i>Hicoria ovala</i> . . . . .	294
Goldenrod . . . . .	271	<i>Hicoria Pecan</i> . . . . .	293
Goose, Wild . . . . .	125	High Council, how formed . . . . .	25
Government license for wireless, to obtain . . . . .	125	High Council, how held . . . . .	177
Grand Council, ceremony of . . . . .	25	High Hikers, horns of the . . . . .	176
Grand Council, how held . . . . .	177	Highhole, or Flicker . . . . .	330
Grand Coup badge, design and color . . . . .	22	Hike Song" words and music . . . . .	72
Grand Sachem, qualifications for . . . . .	21	Hiking, rules good in . . . . .	140
Grand Sachem badge, design and color . . . . .	21	Hiking trips should have object . . . . .	147
Grand Sagamore, qualifications for . . . . .	21	<i>Hirundo erythrogaster</i> . . . . .	335
Grand Sagamore badge, design and color . . . . .	22	"Hither Thunder!" Words and music . . . . .	70
Grant, U. S., trained in woodcraft . . . . .	3	Hog peanuts as food . . . . .	162
Grass mats and camp loom . . . . .	275	Home Cook degree, tests for . . . . .	399
Grass of Parnassus . . . . .	152	Home Craft, coups for . . . . .	306
Grate, green log . . . . .	276	Home Star, or Pole Star, Game . . . . .	40
Gray, or Aspen-leaved, Birch . . . . .	277	Honorary members sometimes elected . . . . .	28
Gray, or Yellow Birch . . . . .	277	Hoop, Black, or Water, Ash . . . . .	311
Great Bear, or Big Dipper . . . . .	114	Hoot, or Barred, Owl . . . . .	321
Great Blue Heron . . . . .	321	Hop Hornbeam, Ironwood, Hard-hock, Leverwood, or Beetlewood . . . . .	297
Great Horned, or Cat, Owl . . . . .	124	Horn, camp . . . . .	186
Grounding the aerial . . . . .	124		
Group Singing . . . . .	55		

PAGE	
175	Horns of the High Hikers
321	Hornbeam, American
212	Hornbeam, Hop
11	Horseback, riding coups for
59	Horseman degree, tests for
357	Hostess degree, tests for
20, 28	Hostile Spy Game
5	House Wren, Common
306	Housekeeper degree, tests for
312	How a snake bites
287	How Men Found the Great Spirit
323	How to earn money
102	How to form a Tribe
246	How to know the wild things
364	How to make a Council Ring
397	How to make a wireless set
285	How to make the Council Fire
308	Hummingbird, Ruby-throated
297	Hunter degree, tests for
183	Hunter in town degree, tests for
208	Hunter's lamp
340	Hyades, constellation of
221	<i>Hylocichla mustelinus</i>
28	<i>Hyloxys hirsuta</i>
181	<i>Icterus galbula</i>
22	Idiography, or picture writing
174	<i>Impatiens biflora</i>
140	<i>Inaukiwin</i> degree, tests for
208	Inbringing of a Newcomer
198	Indian clock, or sundial
357	Indian Craftsman degree, tests for
287	Indian Cucumber, as food plant
143	Indian dancing
323	Indian, keen eyes of the
268	Indian Leg Wrestle
308	Indian Lore degree, tests for
350	Indian names for the months
320	Indian names for the Pole-star, and
203	Big Dipper
204	Indian paints, how made
201	Indian Paint-brush, or Painted Cup
203	Indian Pipe
201	Indian Turnip, or Jack-in-the-pulpit
203	Indian Turnip, as food
204	Indian tweezers
201	Indian well, the
201	Individual tally book
201	Indoor Council Fire
201	Indoor Games
203	Induction coil for wireless set
201	Initiation of members
203	Initiation trials
28	Insect stings, treatment for
177	Insects, the study of
170	Inspection in camp
330	Installation of members
72	Installation of the higher ranks
140	International Morse Code, the
147	Ironwood, Hard-back, Leverwood,
335	Beetlewood, or Hop Hornbeam
70	<i>Jabonigan-Ikwe</i> degree, tests for
162	Jack-in-the-pulpit, or Indian Turnip
309	Jack-in-the-Pulpit, as food plant
306	Jewelweed, Touch-me-not, or Silverleaf
40	Judas Tree, or Red-bud
28	<i>Juglans cinerea</i>
113	<i>Juglans nigra</i>
123	<i>Kalmia latifolia</i>
297	<i>Kee-mo-sah-lee</i> degree, tests for
150	

PAGE	
176	Keeping up the old trails
293	<i>Kikinawina</i> degree, tests for
297	Kingbird
347	Kingdom Game
400	<i>Kisibigaige-Winini</i> degree, tests for
401	Kitchen, camp
49	<i>Kitchi-odena-winini</i> degree, tests for
336	<i>Kitigan</i> degree, tests for
402	<i>Kitigewin</i> degree, tests for
340	Knife and Hatchet, or whittling and
114	chopping
260	Knife, rules for using a
5	Knot tying, coups for
265	Knots campers should know
177	
123	Lace, or thong, to make
178	Lady's Slipper, Showy
330	Lady's Slipper, Yellow
404	Lamp, hunter's
405	Lamp of Fortitude, rays from the
210	Lamp of Truth, rays from the
317	Language of signs
336	Lantern, woodman's
274	Lantern and flag signals, railway
332	Larch, Tamarack, or Hackmatack
155	<i>Larix laricina</i>
274	<i>Larus argentatus</i>
405	Lassoing, coups for
30	Latitude taking, coups for
217	Latrine making, coups for
405	Latrine, provision for, in camp
192	Laundry Expert degree, tests for
79	Laurel, Mountain
141	Laws and punishments
44	Laws, changes of the
406	Laws, of Woodcraft Boys
164	Leadership in camp
314	Lean-to shelter, to make
243	Leather buttons, to make
276	Leather lace or thong, to make
270	Lee, Robert E., trained in woodcraft
278	Leverwood, Ironwood, Hard-back,
102	Beetlewood, or Hop Hornbeam
217	License, Government, for wireless
180	Life Craft, coups for
164	Life Craft degree, tests for
9	Life Force, the
57	Life Saving, coups for
124	Life saving in burning building
30	Lighting a fire
10	Lightning, treatment of injured from
144	Lightning Wheeler degree, tests for
267	Lights for camp use
176	<i>Lilium philadelphicum</i>
32	<i>Lilium superbum</i>
127	Lime, Whistle-wood, Basswood, White
20	wood, or Linden
112	Lincoln, Abraham, trained in woodcraft
275	Linden, Lime, Basswood, Whitewood,
162	or Whistle-wood
274	<i>Linnaea borealis</i>
305	Liquidambar, Bilsted, or Alligator Tree
306	<i>Liquidambar styraciflua</i>
305	<i>Liriodendron tulipifera</i>
32	List of Sagamores and Sachems
21	Little Lodge badge, design and color
268	Liverleaf, or Hepatica
270	<i>Lobelia cardinalis</i>
354	Log riding, coups for
81	Lone Hunter Dance
61	Lone Star Trick, the
354	Lone tramping, coups for

	PAGE		PAGE
Long-leaved, Georgia, Southern, Yellow, or Hard Pine	235	Mud baking of fish and game	186
Loom, camp, and grass mats	225	"Muje Mukesin," words and music	76
Loom, Navajo	227	Mushrooms, Fungi, or Toadstools	194
Loon	326	Mushrooms, test of, by sporeprint	194
Lost, what to do when	252	My Vacation Game	53
Lupine	238	Myer Code signaling, coups for	358
<i>Lupinus perennis</i>	268		
Mad dog or snake bite, treatment for	144	<i>Nabikwa-Ninini</i> degree, tests for	418
Magic Music Game	60	<i>Nagamed</i> degree, tests for	397
Mail Chief for camp, duties of	174	Name, winning a	34
Mallard, Wild Duck	327	Names by Topics Game	58
Mandrake, or May Apple	270	<i>Namid</i> degree, tests for	388
<i>Manitowish</i> degree, tests for	420	<i>Nampeyo</i> degree, tests for	415
Map making, coups for	359	National Council, officers of the	ix
Maple, Ash-leaved, or Box Elder	310	Nature Study, coups for	362
Maple, Red, Scarlet, Water, or Swamp	310	Navajo Feather Dance	44
Maple, Silver, Soft, or White	309	Navajo loom	227
Maple, Sugar, Hard, or Rock	308	<i>Navabik</i> degree, tests for	411
Market Woman, or Buyer degree, tests for	410	Near-sightedness, and the remedy	141
Martin, Purple	335	Nebula in Orion's Sword, the	319
<i>Mashiki</i> degree, tests for	381	Needle case, to make of bone	246
Match-fire proficiency, coups for	356	Needle Craft, coups for	368
Mats, grass, and camp loom	226	Needlewoman degree, tests for	412
May Apple, or Mandrake	270	Nets for flies and mosquitoes	181
Meaning of the badges	21	New member's work	11
Measuring weights and distances	103	New York City, wild life around	297
Medley Scouting Competition	51	<i>Nikwaka-winiini</i> degree, tests for	420
Meeting place, arrangement of	7	Nimrod, trained in Woodcraft	3
Meetings, when and where held	7	<i>Nind-ahi</i> degree, tests for	414
<i>Melospiza melodia</i>	334	<i>Nisso-bidon</i> degree, requisite for	423
Membership, voting on candidates for	31	Norway, Canadian, or Norway Pine	285
Membership dues	5	Nurse degree, tests for	414
Men of history, trained in woodcraft	3	<i>Nysoa sylvatica</i>	312
Menagerie Game	50		
Menagerie Party Game	60	Oak, Golden, or Black	301
Message to Woodcraft Boys	3	Oak, Red	300
Metal Worker degree, tests for	411	Oak, Scarlet	300
<i>Midjim</i> degree, tests for	393	Oak, White	298
<i>Midjim Binadiswin</i> degree, tests for	409	Oak, Yellow, Chestnut, or Chinquapin	290
<i>Mikon</i> degree, tests for	416	Scrub	
Milfoil, or Yarrow	273	"O Beautiful for Spacious Skies," words and music	67
Milkweed	278	<i>Odaka-winiini</i> degree, tests for	409
<i>Mimus polyglottos</i>	335	<i>Odena-Goussed</i> degree, tests for	495
Mineralogy, coups for	363	<i>Odena-winiini</i> degree, tests for	425
Minisino, tests for	38	Officers elected at annual meeting	27, 48
Minisino, to qualify as	19	Officers of the Council of Guidance	ix
<i>Misigwahid</i> degree, tests for	394	Officers of the National Council	ix
Moccasin Flower, Purple	271	Officers of Tribe, election of	5
Moccasin Snakes	338	Oil Nut, White Walnut, or Butternut	293
Mockernut, White-heart, or Big-bud, Hickory	294	Ojibway Snake Dance	84
Mockingbird	335	<i>Olor buccinator</i>	328
<i>Mokodasso-Winiini</i> degree, tests for	384	<i>Olor columbianus</i>	328
<i>Monarda didyma</i>	277	Omaha Tribal Prayer, to close Council	9, 26
Money, how to earn	260	"Omaha Tribal Prayer," words and music	71
<i>Moninico</i> degree, tests for	374	One-legged Chicken Fight Game	45
<i>Monotropa uniflora</i>	270	Operation of wireless apparatus	129
Months, Indian names for the	164	Orchid, Queen	271
Moon, the	318, 319	Orchis, Showy	272
Moons, names of the	27	<i>Orchis spectabilis</i>	272
Moose, Red, or Slippery, Elm	303	Order of doings in Council	8
Morse Code signaling, coups for	358	Origin of the Bluebird, the	97
Mosquitoes, black flies, etc	181	Orion, constellation of	31
Mother Councilor, qualifications for	21	<i>Osage</i> Orange, Bodark, or Bow wood	423
Motoring, coups for	354	<i>Oshki-Abinodgi</i> degree, tests for	384
Mountain climbing, coups for	355	<i>Ostiwini</i> degree, tests for	402
Mountain Laurel	273	<i>Ostya Virginiana</i>	297
Mountaineer degree, tests for	412	Oswego Tea, or Bee Balm	27
		<i>Otus asio</i>	27
		Outdoor Games	47



PAGE		PAGE		PAGE
186	Outdoor proverbs	202	Poplar, Balsam	201
76	Outdoor sleeping	135	Poplar, Yellow	305
194	Outfitting for camping trip	170	Popple, Aspen Poplar—Quaking Asp.	
194	Owl, Great Horned, or Cat	324	or Quiver Leaf	280
55	Owl, Hoot, or Barred	323	<i>Populus balsamifera</i>	201
358	Owl, Screech	324	<i>Populus deltoides</i>	201
	Ox-eye Daisy	270	<i>Populus tremuloides</i>	280
418			Portrait Party Game	60
397	Paddling, coups for	354	Potatoes baked in ashes	186
34	Painted Cup, or Indian Paint-brush	276	Pot hanger, to make	182
58	Paints, woodcraft	243	Potter degree, tests for	415
388	Paleontology, coups for	363	Power circuit for wireless use	125
415	Paper, Canoe, or White Birch	206	Prairie Turnip, or Bread-root, as food	
ix	<i>Parnassia Caroliniana</i>	273	plant	194
362	Partridge or Ruffed Grouse	320	Prevention of fire	133
44	Pathfinder, tests for	38	<i>Progne subis</i>	335
227	Pathfinder, to qualify as	18	Program at camp	175
411	Patriotism and citizenship	145	Proverbs, outdoor	202
141	Patriotism degree, tests for	414	<i>Prunella vulgaris</i>	268
319	Peace Messenger, coups for proficiency	350	Punishments by Chief and Council	20
246	Peace Pipe Ceremony, the	80	Purple Grackle, or Crow Blackbird	333
368	Peach stone baskets, to make	246	Purple Martin	335
412	Pecan	203	Purpose of the Woodcraft League	xv, 27
181	<i>Pelecanus erythrorhynchos</i>	326	Putting up the teepee	239
11	Pelican	326		
297	<i>Pemthestes atricapillus</i>	336	Quail, or Bobwhite	329
426	Pennsylvania or Canada Anemone	273	Quaking Asp, Quiver-Leaf, Aspen	
3	Pepperidge, Tupelo, or Black or Sour		Poplar, or Popple	280
414	Gum	312	Queen Anne's Lace	273
423	Photography, coups for	164	Queen Orchid	271
285	<i>Picea Canadensis</i>	287	Quercitron, or Black or Golden Oak	301
414	Pictography, Indian	155	<i>Quercus alba</i>	298
312	Picture frame, birch bark	216	<i>Quercus coccinea</i>	300
	Picture writing	155	<i>Quercus Muhlenbergii</i>	290
301	Pignut Hickory	295	<i>Quercus palustris</i>	302
300	Pilot Snake	338	<i>Quercus rubra</i>	300
300	Pin, or Swamp, Oak	302	<i>Quercus velutina</i>	301
208	Pine, Long-leaved, Georgia, Southern,		Quicksight Game	48
	Yellow, or Hard	235	<i>Quiscalus quiscula</i>	333
290	Pine, Red, Canadian, or Norway	283	Quiver Leaf, Quaking Asp, Aspen Pop-	
	Pink Azalea	271	lar, or Popple	280
67	<i>Pinus palustris</i>	285	Quorum, what constitutes a	28
409	<i>Pinus resinosa</i>	285		
495	<i>Pinus strobus</i>	285	Rabbits and hares, tracks of	207
125	Pipsissiwa, Spotted	278	Railway signal code	101
27, 48	<i>Piranga erythromelas</i>	335	Rake, camp	228
ix	Pitcher Plant	270	Raspberry, Redcap, or Purple Flower-	
ix	Pitching camp	173	ing	277
5	Plane Tree, Buttonwood, Buttonball,		Rat-on-the-Lodge Game	50
293	or Sycamore	306	Rattlesnakes	338
84	<i>Planesticus migratorius</i>	337	Receiving apparatus for wireless	127
328	<i>Plantago major</i>	273	Receiving wireless message	130
328	Plantain, Ribgrass, or Whiteman's		Recording animal tracks	234
9, 26	Foot	273	Red, Canadian, or Norway Pine	235
71	Plants, edible	101	Red Cross examination, coups for	369
45	Plants and flowers, the study of	205	Red Lily, or Wood Lily	276
129	<i>Platanus occidentalis</i>	420	Red, Moss, or Slippery Elm	303
271	Plays, Pageants, and Masques	80	Red Oak	300
272	<i>Platophenax nivalis</i>	335	Red, Scarlet, Water, or Swamp Maple	310
272	Pledges for Tally Hoek		Red, Star-leaved, or Sweet Gum	366
272	Pleiades, constellation of	317, 318	Red Trillium, or Smelly Wake-rob	274
8	<i>Podophyllum peltatum</i>	270	Red bud, or Judas Tree	308
97	Poison Game	11	Redcap, or Purple Flowering, Rasp-	
2	Poisoning, toadstool, treatment for	10	berry	271
11	Poisonous snake bite, treatment for	340	Red-tailed Hawk, or Henhawk	327
135	Poisonous snakes, how determined	448	Reedbird, or Bobolink	332
184	Poisonous Toadstools	191, 195	Remedy for snake bite	114, 140
402	Polaris, the Pole-star	314	Remedy for toadstool poisoning	190
207	Pole-star	314	Revolver shooting, coups for	350
2	Pole-star Game	46	Ribgrass, or Plantain	273
2	<i>Polygonatum biflorum</i>	273	Rifle shooting, coups for	359
3	Poplar, Aspen	200	Road to Fairyland, the	95

	PAGE		PAGE
Roasting meat at campfire	185	Signs and blazes in the city	122
Robe, Council, how made	26	Signs, grass and twig	257
Robin	337	Signs used by tramps	259
Rock, Hard, or Sugar, Maple	308	Signaling, coups for	358
Rock Tripe, to prepare for food	191	Signals by shots	202, 258
Rod making, coups for	361	Signals on the railway	161
Roll call in Council meetings	8	Signals, smoke	258
Rollo, the sea king	3	Signals, weather	160
Roof camping and gardening	163	Signals, when lost	203
Rose Pink	272	<i>Silene Virginica</i>	276
"Rouser," or "Reveille," words and music	69	Silver, White, or Soft, Maple	309
Routine in camp	175	Silverleaf, or Jewelweed	274
Rubbing-stick fire	230	<i>Sisyrinchium angustifolium</i>	268
Rubbing-stick fire at Council meetings	8	Size, height, and weight guessing, coups for	357
Rubbing-stick fire lighting, coups for	357	Skiing, coups for	354
<i>Rubus oeratus</i>	277	Skunk Cabbage	278
Ruby-throated Hummingbird	330	Sleeping outdoors	135
<i>Rudbeckia hirta</i>	274	Slippery, Moose, or Red Elm	303
Rue Anemone	273	Slippery Elm, to prepare for food	191
Ruffed Grouse, or Partridge	329	Small Stock Farmer degree, tests for	420
Rules for conserving health	139	Smoke signals	258
Rules for using a knife	220	Smoke signals when lost	203
Rules in camp	176	Snake bite, treatment for	144, 340
<i>Sabbatia angularis</i>	272	Snakes, good and bad	338
Sachem, qualifications for	21	Snakes, harmless, beneficent to the farmer	340
Sachem badge, design and color	22	Snowbird	333
Sagamore, qualifications for	21	Soft, White, or Silver, Maple	300
Sagamore badge, design and color	22	Solemnity Game	46
Sagamores and Sachems, list of	33	<i>Solidago Canadensis</i>	274
<i>Salix nigra</i>	200	Solomon's Seal	273
Salute, how given	21	Solomon's Seal, as food plant	194
<i>Sanguinaria Canadensis</i>	270	Songs	65
Sanitation, camp	174	Alouette	70
Sardapalus, trained in woodcraft	3	America	65
<i>Sarracenia purpurea</i>	276	Canoeist's Love Song	73
Sassafras, or Agua Tree	300	Closing Lullaby	73
<i>Sassafras sassafras</i>	306	Death Song (Ojibway)	74
<i>Saxifraga Virginiana</i>	270	Hike Song	72
Saxifrage	270	Hither Thunder!	76
Scarlet Oak	300	Muje Mukesin	76
Scarlet, Red, Water, or Swamp, Maple	310	O Beautiful for Spacious Skies	67
Scarlet Tanager	335	Omaha Tribal Prayer	71
Scout degree, tests for	416	Rouser, or Reveille	69
Scout Runner degree, tests for	417	The Star-Spangled Banner	66
Scouting Game	47	Zon-zi-mon-de	75
Screech Owl	324	Song-odis degree, tests for	375
Seagull, Common	326	Song-Sparrow	334
Seamanship degree, tests for	418	Sour or Black Gum Pepperidge, or Tupelo	312
Second Chief, selection of	5	Southern, Long-leaved, Georgia, Yellow, or Hard Pine	245
Secrets of the Woods, the twelve	xvi	Souvenir spoons, to make	248
Self-heal, or Heal-all	268	Spark-gap, wireless	125
Sending apparatus for wireless set	124	Sparrow-roof bird box	251
Sending wireless messages	120	<i>Spathyola foetida</i>	278
Seven Swans, the	108	Spear, the Great Sturgeon Game	58
Shagbark, Shellbark, or White, Hickory	204	Special Councils, how called	28
<i>Shaginapi</i> degree, tests for	376	Spiked willowherb, or Fire Weed	278
Shaman, qualifications and duties	20	Splicing and braiding, coups for	357
Sharpshooter degree, tests for	419	Spoon and fork, to carve	240
Shellbark, Shagbark, or White, Hickory	204	Spoons, souvenir, to make	248
Shelter, waterproof	224	Sporeprint, to make a	194
<i>Shingebis</i> degree, tests for	121	Spot-the-Rabbit Game	40
Shock, or nervous collapse, treatment for	144	Spotted Pipsisiwa	278
Showy Orchis	272	Spring Beauty	271
<i>Stadio stalis</i>	337	Spruce, White	287
Sign language	148	Star gazing, coups for	357
Sign language of the city	122	Star Wiseman degree, tests for	421
Sign talking, coups for	158	Stars as tests of eyesight	318
Signs and blazes, illustrated	256	Stars as the camper sees them	314

PAGE		PAGE		PAGE
122	Stars, first twenty in order of brightness	316	Tests for Pathfinder and Minisino	38
257	Stars, number of, visible	316	"The Star-Spangled Banner"	66
259	Stars, principal constellations	317	Thong, or lace, to make	245
358	Stardowner	270	Three Years' Service degree, to qualify for	421
258	Star-grass, or Blue-eyed Grass	268	Throwing Diamond Hitch, coups for	357
161	Star-grass, Yellow	274	Throwing Life Buoy, coups for	369
258	Star-leaved, Sweet, or Red, Gum	306	Thrush, Wood	336
160	Stickweed, Cleavers, or Bedstraw	273	Thunder Handler degree, tests for	423
203	Still-hunting the Buck, or Deer Hunt, Game	52	Thunder Roller degree, tests for	424
276	Stock Farmer degree, tests for	420	<i>Thuja occidentalis</i>	289
309	Stone signs	256	<i>Tilia Americana</i>	311
274	Storm and hurricane warnings	101	Tilting in the Water	57
268	Storm cap, for teepee	239	Tinder for rubbing-stick fire	230
	Storm Cloud Dance	80	Toadstools, Mushrooms, or Fungi	104, 105
	<i>Strix varia</i>	323	Toadstools, poisonous	104, 105
	Strong Hand Game	45	Toadstools, wholesome	100
357	Stung, or Step on the Rattler, Game	45	Tomtom making, coups for	359
354	Succory, or Chicory	268	Tools for firemaking	230
278	Sugar, Rock, or Hard, Maple	308	Totem, Indian use of	159
135	Summer, or Wood, Duck	327	Totem pole, purpose of, and position in camp	170
303	Sun Lodge or Woodcraft League	xv	Totems in town	131
101	Sundial, to make a	218	Totems of Tribe and Band	30
420	Sunstroke, treatment for	143	Touch-me-not, or Jewelweed	274
258	Supplies for camping trip	170	Town woodcraft	121
203	Surveyors' blazes	256	<i>Toxylon pomiferum</i>	305
44, 340	Swallow, Barn	335	Tracking and trailing	203
338	Swamp, or Pin, Oak	302	Tracks hard to photograph	204
	Swamp, Red, Scarlet, or Water, Maple	310	Trail blazing, or marking	253, 256
340	Swamp, Water, or White Elm	303	Trailing, coups for	358
46	Swan, Trumpeter	328	Trailing Arbutus	270
274	Swan, Whistling	328	Trailing Game	46
273	Sweat Lodge making, coups for	359	Trails, keeping up the old	215
194	Sweet, Star-leaved, or Red, Gum	300	Trap signs	259
68	Swimmer degree, tests for	421	Transformer, for wireless set	124
70	Sycamore, Plane Tree, Buttonball, or Buttonwood	306	Transmitter, connecting up the	126
65	Symptoms of toadstool poisoning	196	Trap for sparrows	252
73	<i>Syndesmon thalictroides</i>	273	Traveler degree, tests for	424
73	Tacamahac, Balm of Gilead, or Balsam Poplar	291	Traveling, coups for	358
76	Tackle making, coups for	360	Treatment for snake bite	340
76	Talk-fest Game	46	Treatment for toadstool poisoning	106
67	Tally book, individual	164	Tree, how to fell a	222
71	Tally Keeper, election of	175	Tree the Coon Game	50
60	Tally Keeper, qualifications and duties	20, 23	Trees, the love for	280
66	Tally Keeper, selection of	5	Trees, the study of	266
75	Tamarack, Larch, or Hackmatack	287	Trees, to determine height of	198
375	Tanager, Scarlet	335	Trials, initiation	11
334	Target for archery	241	Tribe, definition of	21
	Target shooting, coups for	356	Tribe and Council activities	37
or	Taurus, constellation of	317	Tribe Committee, duties of	21
el-	<i>Taxodium distichum</i>	289	Tribe, how to form a	5
	<i>Tchessahid</i> degree, tests for	398	Tribe meetings, when and where held	7
	<i>Tchibakwe-Wigamag</i> degree, tests for	390	Tribe, number of members necessary to form	5
	Teacher degree, tests for	422	<i>Trillium Americanum</i>	270
	Team work in camp	174	Trillium, Big White	270
	<i>Tecoma radicans</i>	278	<i>Trillium erectum</i>	278
	Teepee, making a	236	<i>Trillium Grandiflorum</i>	270
	Teepee or tent making, coup for	358	Trillium, Red, or Smelly Wake-rebin	275
	Teepee, putting up the	239	<i>Trochilus colubris</i>	310
	Teepees for camping trips	172	<i>Troglodytes adam</i>	310
	Telegraph key, the	125	Tropic travel, coups for	354
	Telegraphy, wireless	123	Trumpet Creeper	218
	Telephone receivers, for wireless	128	Trumpeter Swan	336
	Tent or teepee making, coups for	358	<i>Tsuga Canadensis</i>	287
	Tent, to make a teepee	236	Tub Tilting Game	43
	Tents, arrangement of, in camp	173	Tulip Tree, White-wood, Canoe-wood, or Yellow Poplar	305
	Tents for camping trips	172	Tuning coil for wireless	126, 128
	Test of mushrooms by sporeprint	194	Tupelo, Pepperidge, or Black, or Sour Gum	312

	PAGE		PAGE
Turkey Vulture, or Buzzard	124	What to do when lost	202
Turkey-call, to make	246	Whistle-wood, Basswood, Whitewood, Lime, or Linden	311
Turk's Cap Lily	276	Whistle signals, railway	162
Tweezers, Indian	217	Whistling Swan	328
Twelve secrets of the woods	xvi	White Ash	312
Twin Stars, the	98	White, Canoe, or Paper Birch	296
Twin-flower	270	White Cedar, or Arbor-vita	280
Twist, bread, to make	185	White man's woodcraft	198
<i>Tyrannus tyrannus</i>	333	White Man's Woodcraft degree, tests for	425
<i>Ulmus Americana</i>	303	White Oak	298
<i>Ulmus fulva</i>	303	White Pine, or Weymouth Pine	285
Uniform of Woodcraft Boys, illustrated	6	White, Shellbark, or Shagbark, Hickory	294
Use of the axe	222	White, Soft, or Silver, Maple	300
<i>Vagnera racemosa</i>	273	White Spruce	287
Vega, of the Lyre	110	White Walnut, Oil Nut, or Butternut	293
<i>Verbena Lasata</i>	268	White, Water, or Swamp Elm	301
Vervain, or Wild Hyssop	268	White-headed, or Bald, Eagle	323
Village Scout degree, tests for	425	White-heart, Big-bud, or Mockernut, Hickory	294
<i>Viola pedata</i>	268	Whiteman's Foot, or Plantain	273
<i>Viola cucullata</i>	268	Whitewood, Basswood, Whistle-wood, Lime, or Linden	311
Violet, Bird's foot	268	Whitewood, Canoe-wood, Yellow Pop- lar, or Tulip Tree	305
Violet, or Heartsease	268	Whittling and chopping	220
Voting on candidates for membership	31	Who may enter the Woodcraft League	27
Vows of Head Chief and members	29	Wholesome toadstools	196
Vulture, Black	324	Wigwag signaling, coups for	358
Vulture, Turkey	324	Wild Carrot, or Queen Anne's Lace	273
<i>Wadjuw degree, tests for</i>	412	Wild Duck, Mallard	327
<i>Wadohaged degree, tests for</i>	397	Wild Duck, Wood, or Summer Duck	327
Wake-robin, or Trillium	270	Wild fire, destruction caused by	280
Walnut, Black	291	Wild flowers, to preserve specimens	266
Walnut, White	291	Wild flowers, the study of	265
Walking, keep feet straight in	141	Wild Geranium, or Crane's Bill	278
Wampum Collector, selection of	5	Wild Ginger	278
Wampum Keeper, duties of	28	Wild Goose	328
Wampum Keeper, qualifications and duties	20	Wild Hyssop, or Vervain	268
Wampum Keeper, selection of	5	Wild life around New York City	267
Wapato, or duck potato, as food	192	Wild plants, edible	191
War, or Golden, Eagle	323	Wild Spikenard	273
Washington, George, trained in wood- craft	3	Wilderness Cooking, coups for	358
<i>Wassamowin degree, tests for</i>	121	William of Orange, trained in woodcraft	3
Watch as a compass, the	218	William the Conqueror, trained in woodcraft	3
Watch Lodge, duties of	21	Willow bed, Woodcraft	232
Watching by the Trail Game	16	Willow, Black	280
Water Beech, Blue Beech, or American Hornbeam	298	Windflower	273
Water-boiling Contest	51	Winning a name	34
Water-boiling, coups for	57	Wireless for Woodcrafters	121
Water Games	55	Wise Woodman degree, tests for	420
Water Hoop, or Black, Ash	313	Wolf, tracks of	207
Water Moccasin	318	Woman's Power in History degree, tests for	427
Water, Red, Scarlet, or Swamp, Maple	410	Wood, or Summer, Duck	327
Water sports and travel, coups for	351	Wood supply for Council Fire	175
Water supply in camp	180	Wood Thrush	330
Water, White, or Swamp Elm	303	Woodcraft Boy in Nature's school	1
Waterproof shelter of wilderness stuff	224	Woodcraft boy in the forest, the	280
Wayseker, to qualify as	18	Woodcraft Boys, message to	3
Weather signals	160	Woodcraft buttons, to make	245
Weather wisdom	198	Woodcraft Club, for men and women	xv
Weight, size, and height guessing, coups for	57	Woodcraft Council Ring	177
Wet feet, cause of hoarseness	142	Woodcraft dyes	245
Weymouth Pine, or White Pine	285	Woodcraft in town	121
What to do in a burning house	145	Woodcraft Indian tribes	11
What to do in case of fire	134	Woodcraft Laws, the	10
		Woodcraft League, Lodges of	xv
		Woodcraft League, purpose of	xv
		Woodcraft paints	243

# Index

441

Woodcraft study in museums and li-	PAGE
braries	181
Woodman's lantern	216
Woodpecker, Downy	330
Work for new members	11
Wren, Common House	336

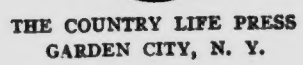
Yarrow, or Milfoil	273
Yellow, Chestnut, or Chinquapin Scrub	299
Oak	283
Yellow, Long-leaved, Georgia, South-	
ern, or Hard Pine	

Yellow, or Gray Birch	PAGE
Yellow Lady's Slipper	207
Yellow Poplar, Canoe-wood, White-	274
wood, or Tulip Tree	305
Yellow Star-grass	274

Zonaidura macroura	330
Zigzag, or False Solomon's Seal	273
"Zon-zi-mon-de," words and music	75
Zuni Coil as robe badge.	22



... ..



5047





